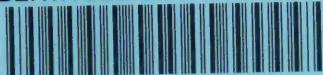


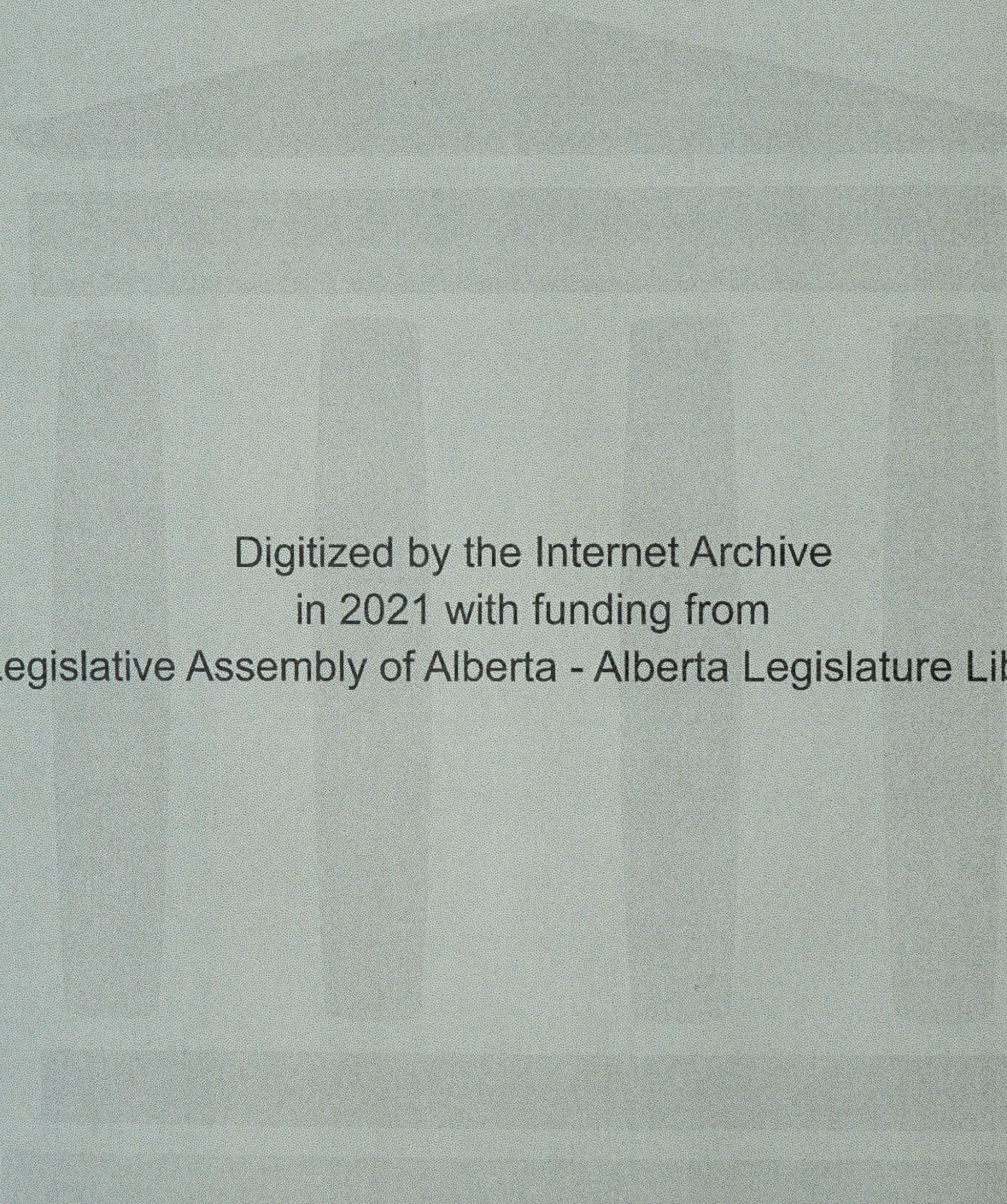
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ANNUAL REPORT
OF THE
Department of Public Works
OF THE
NORTH-WEST TERRITORIES

1903

PRINTED BY ORDER OF THE LEGISLATIVE ASSEMBLY



REGINA
JOHN A. REID, GOVERNMENT PRINTER
1904

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DEPARTMENT OF PUBLIC WORKS,

REGINA, *February 29th, 1904.*

To His Honour

AMÉDÉE EMMANUEL FORGET,

Lieutenant Governor of the North-West Territories of Canada.

SIR,—

I have the honour to transmit herewith the Annual Report of the Department of Public Works for the year 1903.

I have the honour to be, Sir,

Your obedient servant,

G. H. V. BULYEA,

Commissioner of Public Works.

CONTENTS.

	PAGE
Correspondence branch.....	9
The Coal Mines Regulations Ordinances.....	10
The Steam Boilers Ordinance	20
Accountant's branch	40
Surveys branch	42
Engineering branch.....	58
Local Improvement branch	87
Villages.....	95
Irrigation branch	96
Index	98

DEPARTMENT OF PUBLIC WORKS,

REGINA, *February 29th, 1904.*

G. H. V. BULYEA, ESQ., M.L.A.

Commissioner of Public Works.

Sir,—I have the honour to submit the Annual Report of the Department of Public Works of the North-West Territories for the year 1903.

During the past year the department has experienced many changes in the personnel of its staff on account of the general desire of a number of the officials to get out and do for themselves in private enterprises and in classes of work where there were chances of more rapid advancement than in the Government service. The effect of these changes have, I am glad to say, been well met by the members of the service who remained and those taken on to fill the vacancies.

The general wave of prosperity in which the Territories have participated along with the rest of the Dominion, the bountiful harvests of 1901 and 1902 and the above average harvest of 1903, together with the high prices which prevailed for all commodities from the farming and ranching districts, had a very marked effect upon the country. So, that although a large immigration has taken place in the past few years a still larger influx may be looked for from Great Britain and Ireland, the Continent and the neighbouring Republic to the south of us. This means that many of the heretofore unoccupied districts of the Territories will from year to year become opened up and the settled portions will become more thickly populated, resulting in a greater demand than in the past for new roads, better roads, additional bridges, ferries and other facilities to enable the settlers to reach with as little difficulty as possible their local market centres. Drainage works will also be required to permit of the better cultivation of the land and the improving of highways in certain sections of the country. More fireguards will be needed for the protection of the stockmen and some system must be devised to assist settlers in testing for a water supply in those districts where the ordinary efforts of the people themselves have proved ineffectual. Prospective railway construction will also have a very pronounced effect in the bringing in to the country many people and, from the heavy expenditure incurred by existing railways in the improvement of their permanent way and terminals, it is obvious that those corporations are doing their utmost to enable them to handle to the best advantage the increased traffic which is bound to present itself in the very near future.

Although the demands upon the Department of Public Works have been great in the past there is little doubt but that they will increase in the future along the lines of supplying the more important works, leaving those of a minor class to be undertaken by the people themselves under the provisions of the new local improvement ordinance, passed at the last session of the Legislative Assembly, giving increased power to local organisation. In a new country like these Territories there was a time when everything in the way of improving the facilities for travel, providing a water supply to offset in a measure the shortcomings of

nature in certain parts, the construction of fireguards and the doing of like works for the benefit of and to assist the struggling settler, had to be undertaken by a kind, benevolent and paternal government and during a time when the whole country was practically open for travel. Owing to the rapid settlement of large areas, and the consequent fencing of lands taken up, the arteries for travel are necessarily changed and confined in great part to the road allowances laid out in the system of survey. This changed condition means that more work must be done in the way of road improvement and the time has come when a fair share of this work will have to be undertaken by local organisations themselves. It is worthy of note, however, that the people in many sections of the country began to realise this some little time ago and asked for greater taxing powers, as with the limited powers they had under the former local improvement ordinance, in conjunction with the limited means of this department, it was impossible to meet the many and ever increasing demands for works of a public nature. The new local improvement ordinance will doubtless do much to offset these conditions, and although the power is given under its provisions to increase the assessment up to a maximum of \$8 per quarter section per annum, it is not thought that it will be found a burden by the people themselves within parts of the Territories where it will become necessary to assess the lands to this limit.

During the year 1903, owing to there being no severe and disastrous floods, the department was not called upon to replace as many of its important structures as in the former year, and it is a great satisfaction to know that all the bridges carried out in 1902 have been or are nearly all replaced by new structures, a number of which are of a more permanent and durable character than those erected in the first instance. The total expenditure incurred by the department during the year on public works out of general revenue amounted to \$372,220.00 or nearly \$74,000.00 more than was expended from this source in 1902. It is, of course, to be understood that this sum includes certain works completed in 1902 but not paid for until 1903. For the purpose of comparison with the expenditure of former years and of showing the growth of the annual expenditure of the department, the following table, compiled from former reports, is appended.

Expenditure in 1898.....	\$129,046
“ “ 1899.....	146,403
“ “ 1900.....	175,960
“ “ 1901.....	236,574
“ “ 1902.....	298,238
“ “ 1903.....	392,220

Showing that in 1903 \$243,174.00 was expended over and above the amount expended in 1898. On a percentage basis the expenditure of 1899 was 13.45 per cent. above that of 1898	
that of 1900 “ 20.19 “ “ “ 1899	
“ 1901 “ 34.45 “ “ “ 1900	
“ 1902 “ 26.06 “ “ “ 1901	
“ 1903 “ 24.47 “ “ “ 1902	
“ 1903 “ 188.44 “ “ “ 1898	

That is, in a period of five years the expenditure incurred in one year had grown 188.44 per cent., which shows in how marked a way the

department has endeavoured to keep pace with the growth of the country, while at the same time its responsibilities have increased in a like or greater proportion, since so many of the works of former years become a charge upon the department for their proper maintenance and repair. To in a measure meet these conditions an effort was made at reorganising the inside staff of the department by delegating certain work to certain members of the staff and thus training each in a special line to promote greater efficiency and more prompt handling of mail matters delegated to the administration of the department.

For the sake of uniformity the system adopted in the preparation of former reports will be followed as nearly as possible throughout this report with this exception, that since the small local improvement districts have been disorganised by the new ordinance which came into effect on the 1st of January, 1904, there will in consequence be no list of overseers of local improvement districts.

CORRESPONDENCE BRANCH.

Staff.....	{ 1 chief clerk. 3 clerks. 1 messenger.
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The following statement shows the volume of correspondence handled by the department during the year and will in a measure illustrate the amount of work involved in dealing with the public through this medium

Communications received, 1901.....	29,098
“ “ 1902.....	42,251
“ “ 1903.....	46,306
Communications sent, 1901.....	58,005
“ “ 1902.....	86,730
“ “ 1903.....	88,304
Irrigation Office, 1901.....	3,392
“ “ 1902.....	3,417
“ “ 1903.....	3,519
“ “ special circulars, 1903	2,800
Total, 1901.....	90,495
“ 1902.....	132,398
“ 1903.....	140,929
Average number dealt with daily, 1901.....	294
“ “ “ “ “ 1902.....	431
“ “ “ “ “ 1903.....	463
Entries of cash received, 1901.....	4,053
“ “ “ “ 1902.....	9,651
“ “ “ “ 1903.....	10,429

The above table shows an increase of communications received and sent over and above those of 1902 with a daily average of 463 communications handled by the department.

The administrative work in connection with The Coal Mines Regulations Ordinance has been handled by myself with the assistance of one clerk, while The Steam Boilers Ordinance has been looked after largely by one clerk and a stenographer, which has in a measure taken this work from the correspondence branch.

THE COAL MINES REGULATIONS ORDINAMCE.

Inside staff..... 1 clerk and stenographer.
 Outside staff..... 1 inspector.

About fifteen new coal mines were opened up during the year of which the department has been notified, and the following schedule shows the mines which have been operated in the Territories of which we have a record in the department.

NAME	LOCATION	OPERATED BY	CHARACTER OF COAL
Anthracite.....	Anthracite, Alta	H. W. McNeill Co. Ltd ..	Anth'cite
Canmore	Canmore, "	" ..	Bitumin's
Lethbridge No. 3 ..	Lethbridge, "	Alberta Ry. & Coal Co. . .	"
North Star	Strathcona, "	Martin Bros.	"
Humberstone.....	Edmonton, "	Wm. Humberstone	"
Clover Bar	Clover Bar, "	Daly & Lindsay	"
Brandt	Edmonton, "	H. Brandt	"
Milner	"	J. Milner	"
Steeves	Strathcona, "	Martin & King	"
Moret	Edmonton, "	Edmonton Coal Co.	"
Coit	"	Marsh & Nibbs	"
Sturgeon	Namoo, "	Austin & Brandt	"
Superior	Strathcona, "	J. McKernan	"
Black Diamond....	"	Martin Bros.	"
Sturgeon	Namoo, "	Robert Kelly	"
White Star.....	Calgary, "	D. Davidson	"
Black Diamond....	Okotoks, "	Cooper & McPherson	"
Knee Hill	Calgary, "	T. Hunt	"
Morinville.....	Morinville, "	Edward Cheigny	"
Gillespie	Medicine Hat, Assa	Frank Gillespie	"
Culley	"	Joseph Culley	"
Crockfords	"	Crockford Bros.	"
No. 1	Coalfields, "	Souris Coal Min'g Co. Ltd	"
Farmers'	"	" ..	"
No. 3	"	" ..	"
Taylor	"	" ..	"
Pure Lignite	"	" ..	"
Raith	Edmonton, Alta.	Wm. Humberstone	"
Watson	Estevan, Assa	Henry Watson	"
Yardley	"	Henry Yardley	"
Canadian - American Coal & Coke Company	Frank, Alta	Canadian-American Coal & Coke Co. Ltd	"
Eureka Coal and Brick Co., Ltd. . .	Estevan, Assa	Eureka Coal & Brick Co., Ltd	"
Baldwin	Edmonton, Alta	Edmonton Coal Co.	"
Bush	"	Robert Mays	"
No. 2	Coalfields, Assa	Souris Coal Min'g Co. Ltd	"
Ashcroft	Lethbridge, Alta.	James Ashcroft	"
Russell	"	Geo. F. Russell	"
Hanke	"	Joseph Hanke	"
Chipman Creek ..	Pincher Creek, Alta.	McFarlane & Milne	"
Christie	"	E. G. Ambrose	"
Galbraith	Cowley, Alta.	R. J. Galbraith	"
Eagle Mine.....	Edmonton, "	E. D. Martin	"
Essar	Medicine Hat, Assa	Essar Bros.	"
Hoover	"	I. Hoover	"
Cameron	Okotoks, Alta.	John Cameron	"
Little Colliers ..	Frank, "	United Coal Fields of British Columbia., Ltd.	"
Gouin	Morinville "	George Steffas	"
Gallagher & Hull ..	Edmonton "	Gallagher & Hull	"
White Light	"	Smith & Hooper	"
Clover Bar	Clover Bar "	Fowler, Keith & Falconer	"

COAL Mines operated in Territories—*Continued.*

NAME	LOCATION	OPERATED BY	CHARACTER OF COAL
Coal Coulee.....	High River, Alta	D. E. Riley	Bitumin's
Byron Creek	Frank, "	Byron Creek Col'ries Ltd	"
Blackfoot Reserve.	Gleichen, "	Blackfoot Indians	"
Martin	Strathcona, "	James Martin	"
Trimble	Edmonton, "	J. Miller & Son	"
Smith	Morinville, "	F. Smith	"
Holway	Cowley, "	Alberta Coal & Coke Co.	"
Lubreck	Lubreck, "	"	"
Bankhead	Banff, "	C. P. R. Mining & Metallurgical Department	Anthracite
Bienfait	Bienfait, Assa.....	"	Bitumin's
Roche Percee Coal Mining Co. Ltd..	Roche Percee, Assa ..	Roche Percee Coal Mining Company, Ltd.....	"
Griffith	Coalfields, "	John Stock	"
Watson	Estevan, "	Henry Watson	"
Nonsuch	Edmonton, Alta	James R. Stewart	"
Bellevue	Frank, "	West Canadian Collieries, Limited.....	"
Coleman	Coleman, "	International Coal and Coke Company.....	"

The total output of coal for the year shown by the returns made under the provisions of the Ordinance is as follows:

Bituminous and lignite coal.....	617,754 tons
Anthracite coal.	5,185 "
Total.....	622,939 tons

In comparison with the years 1901 and 1902 the following table will show the great increase in the output of bituminous and lignite coal and the falling off in the output of anthracite coal as compiled from former reports.

	1901 tons	1902 tons	1903 tons
Bituminous and lignite coal.....	331,907	494,087	617,754
Anthracite coal	14,742	16,587	5,185
Total.....	346,649	510,674	622,939

It will be observed that the total output of bituminous and lignite coal exceeds that of 1902 by 123,667 tons, being an increase of 25 per cent. on these two classes. The falling off in the output of anthracite coal was due to the fact that the mine at Anthracite, operated by the H. W. McNeill Co., Ltd., was only in operation during a short period of the year and the mine of The Canadian Pacific Railway Co.'s Mining and Metallurgical Department, at Bankhead, had only started operations at the beginning of the year. These mines will be referred to later on in this report.

As has been pointed out in former reports, the coal output of this section of Canada shows in a measure the development which has taken place in the Territories along many lines of industrial pursuit, and with the extensive prospecting that is going on at the present time, as well as the acquisition of coal properties by coal companies and private

individuals throughout those portions of the Territories where the coal bearing formations lie, it will readily be seen that before very long the output must more than double that of the past year, due largely to increased domestic consumption, followed in later years by a greater demand for railway consumption and that of manufactories which are bound to pring up in local centres. The export of coke to Montana for smelting purposes must also aid in increasing the output of the existing mines in the south-west portion of the Territories and be an incentive in the development of what are now only mere prospects in that section. It is sincerely to be hoped that mining development in Western Canada will before many years reach such a stage that many smelters will be established on this side of the line, and thereby assist, by their consumption of coke, in the further development of our coal mines and aid very materially in our further industrial advancement.

In our coal deposits the Territories have undoubtedly a goodly heritage the value of which time will only reveal, and in addition a valuable offset in a prairie country to the disadvantage of having no other fuel for the settler.

Souris Coal District.

The demand of coal from this district has increased on account of its cheapness and the ready home market found owing to the large influx of settlers. The output of the Souris Mining Co., Ltd., has doubled in the past year and improved facilities have been installed for the handling of the mine product. The following new mines have been opened up in the Souris district: At Bienfait by The Canadian Pacific Railway Co.'s Mining and Metallurgical Department; Coalfields by the Roche Percee Coal Mining Co., Ltd.; Coalfields by John Stock; Estevan, by H. Watson.

Lethbridge Coal District.

The Alberta Railway & Coal Co. have added appliances to increase the ventilation of their mine at Lethbridge and have installed a new air compressor so as to be able to add to the number of their air drills at any time. The output of this colliery has been increasing steadily, largely due to its good qualities as a domestic coal.

Crow's Nest Pass Coal District.

In the Crow's Nest Pass coal fields the operations of the Canadian-American Coal & Coke Co. at Frank were showing a very marked development up to the time the disaster occasioned by the slide of a portion of Turtle mountain took place at the end of April last, by which a portion of the town was wiped out of existence and some 83 or 84 lives lost and the entrance to the mine was filled up by a large mass of material from the mountain, together with the destruction of all the outside works of the company and a portion of the branch railway line leading to the mine. In consequence of this disaster the mine was shut down for a number of months, resulting in the lowering of the annual output. It is worthy of note that the company, with their characteristic energy, set to work immediately after the slide and in the course of two months were again shipping a fair amount of coal. The United Coal Fields of British Columbia, Ltd., at Lillie, about eight miles north of Frank, suffered also from this disaster by having two miles of their branch railway line

destroyed. The difficulty has, however, been overcome by building switchback sidings to make new connection with their branch line. This company will soon be in a position to ship coke, having installed a battery of 50 solve ovens for the manufacture of coke. In this district the West Canadian Collieries, Ltd., a new company, backed by French capital, have acquired large coal areas on Byron creek about six miles from Frank, at Bellevue $2\frac{1}{2}$ miles east of Frank and at Blairmore. A branch railway line will be built into Byron creek property. The mine at Bellevue has been opened up and a small shipment of coal has taken place, while the property at Blairmore is now in the early stages of development, having only recently been acquired by the company. The International Coal and Coke Co. have recently secured a large tract of coal land at Coleman, four miles west of Blairmore on the Crow's Nest Pass line. It is expected that these mines will be in operation early this year. Just outside the Crow's Nest Pass, at Lubreck, and five miles west of Cowley, the Breckenridge-Lund Coal Co. have opened up a coal mine which will, no doubt, be shipping coal at an early date.

Canmore Coal District.

The H. W. McNeill Co., Ltd., at Canmore have added an air compressor plant to their works, which has very materially assisted in the ventilation of the mine, and all underground machinery is being driven by compressed air, including drills and rock tunnels. This mine has been a steady producer, its total output being utilised by The Canadian Pacific Railway Company.

Anthracite Coal District.

The anthracite coal mine, operated by the H. W. McNeill Co., Ltd., in this district was shut down for a greater part of the year 1903 on account of litigation with the owners of the adjacent property with whom it was expected at one time that a settlement could be made, whereby the main gangways and machinery of the company could be utilised in further mining on the adjacent property, but unfortunately this has not been effected. The result is that the coal company are now engaged in taking out the pillars of coal remaining in their mine with the ultimate object of abandoning the property. The demand for anthracite coal in the Territories will, however, be met by the output from the new anthracite mine recently opened up by The Canadian Pacific Railway Company's Mining & Metallurgical Department at Bankhead on the east side of Cascade mountain, about five miles from Banff, and on the same strike as that of the veins at Anthracite. Two seams have been opened up and the coal is found to be of first class quality in its chemical constituents, and no doubt, from the rapid development which is taking place, there will be an abundance of this coal on the market to meet the demands for this class of fuel within the next year.

Edmonton Coal District.

In the Edmonton district there is again a marked extension to be noted in the opening up of small mines, but it is expected that there will be an amalgamation of a large number of the small mines in this district at an early date.

SCHEDULE of Accidents in Coal Mines in 1903.

Location	Character of Accident			Total of accidents
	Resulting in death	Serious injury	Slight injury	
Canmore.	4	1	..	5
Coalfields.	1	1	1	3
Frank.	1	1	1	3
Lethbridge.	..	1	3	4
Total Territories..	..	..	..	15

The number of fatal accidents in connection with coal mining operations during the year is two less than in the former year, while the total number of accidents is the same number less than 1902. This of course does not include the lives lost in the Frank disaster, some 83 or 84 in number. While some authorities may be of the opinion that the coal mining operations were in a measure the cause of the slide which took place from Turtle mountain, there are those whose opinion should bear equal weight to the effect that the mine had nothing to do with the disaster. Until such time as the mine is again thoroughly opened up and carefully examined this question cannot be even approximately settled. One thing is certain that the summit of the mountain was in a badly disintegrated condition, due to the nature of its formation, and it is possible that the slide would have taken place even had there never been any mining operations carried on. From the number of fatal accidents reported in connection with the operation of coal mines of parts of the North American continent it is a matter of congratulation that so few fatal accidents have occurred in coal mines in the Territories, and it is to be hoped that the number will always remain low in proportion to the amount of coal mined, while at the same time it is to be regretted that even one life must be lost. It has been the policy of the department to enforce firmly the provisions of The Coal Mines Regulations Ordinance, and it may not be too much to say that to this enforcement is largely due the credit of so few accidents, both fatal and otherwise. So that the prevailing opinion that coal mining is a hazardous occupation would not seem to be true so long as it is carried on under proper supervision and no more hazardous than many other callings when large numbers of men are employed in industrial pursuits.

Examinations Under The Coal Mines Regulations Ordinance.

Examinations under the provisions of the Ordinance for mine manager, pit and fire boss certificates were held during the year at Canmore, Lethbridge, Coalfields, Frank and Anthracite, and certificates were issued as noted hereunder to the candidates who successfully passed such examinations.

Archibald Waite.	Coalfields.	Manager.
Robert Livingstone	Lethbridge.	"
Charles Michael Henretta	Banff.	"
H. R. Giffen.	Coalfields.	Pit Boss.
W. G. Pearson.	Frank.	"
W. G. Flint.	Anthracite.	"
Geo. E. Holmes	Fernie, B.C.	Fire Boss,

Wm. John Davis.....	Canmore.....	Fire Boss.
Samuel A. Jones	Lethbridge	"
J. C. Livingstone.....	"	"
H. R. Giffen.....	Coalfields.....	"
Andrew Hood.....	Frank	"
S. H. Turner.....	Canmore	"
Joseph Sedlock.....	"	"
John Hadfield.....	"	"
Thomas Downs.....	"	"

The following certificates were used under Section 17 of the Ordinance:

Manager Certificates.

James McEvoy.....	Fernie, B.C.
John Brown.....	Banff.
William Addie.....	Frank.
Daniel Elliott	Blairmore.
Chas. Simister.....	Morrissey, B.C.
David Wilson.....	"
Elijah Heathcote.....	"
W. F. Collins.....	Blairmore.
John Leitch Parker.....	North Star.
Alexander Kerr.....	Tonkin, B.C.

The usual schedule of certificates of competency now held under the Ordinance is appended, followed by the annual report of F. B. Smith, B.Sc., Inspector of Coal Mines.

Manager Certificates.

Dan Evans.....	Michel, B.C.
W. D. L. Hardie.....	Lethbridge.
James J. Morris.....	Canmore.
John Little.....	Coalfields.
Wm. Hamilton.....	"
C. E. S. Whiteside.....	Anthracite.
Frank B. Smith.....	Calgary.
Edwin P. White.....	Crow's Nest, B.C.
James Hargreaves.....	Fernie, B.C.
Thos. R. Stockett, Jr.	"
Robinson Pearson.....	"
John B. Wyllie.....	Frank.
Cyrus Morris.....	Frank.
Archibald Waite	Coalfields.
Robert Livingstone.....	Lethbridge.
James McEvoy.....	Fernie, B.C.
John Brown.....	Banff.
William Addie.....	Frank.
Daniel Elliott.....	Blairmore.
Charles Simister.....	Morrissey, B.C.
David Wilson.....	"
Elijah Heathcote.....	"
W. F. Collins.....	Blairmore.
John Leitch Parker.....	North Star, B.C.
Charles Michael Henretta.....	Banff.
Alexander Kerr.....	Tonkin, B.C.

Pit Boss Certificates.

Gus Ostheidt.....	Anthracite.
John Musgrove.....	Canmore.
Charles Emmerson.....	"
Alfred Davis.....	Lethbridge.
J. C. Livingstone.....	"
Robt. Livingstone.....	"

Hugh Scott.....	Lethbridge.
T. H. Williams	Canmore.
Archibald Waite	Estevan.
Cory Weatherby	Fernie, B.C.
Thos. Steele.....	Frank.
Thos. Corkill.....	"
H. R. Giffen.....	Coalfields.
W. G. Pearson.....	Frank.
W. G. Flint.....	Anthracite.

Fire Boss Certificates.

W. E. Watkins.....	Anthracite.
John Wilson.....	Canmore.
J. W. Watkins.....	"
William Cowan.....	"
John James McKay.....	Lethbridge
Robert Scott.....	"
Robert Livingstone.....	"
Hugh Scott.....	"
William Musgrove.....	Canmore.
William Taylor.....	Lethbridge.
Archibald Waite.....	Estevan.
Evan Jones	"
John Anderson.....	Canmore.
Charles Phillips.....	Frank.
Geo. E. Holmes	Fernie, B.C.
William John Davies.....	Canmore.
Samuel A. Jones.....	Lethbridge
J. C. Livingstone.....	"
H. R. Giffen.....	Coalfields.
Andrew Hood.....	Frank.
S. H. Turner	Canmore.
Joseph Sedlock.....	"
John Hadfield.....	"
Thomas Downs.....	"

CALGARY, 31st December, 1903.

B. J. SAUNDERS, Esq.,

Deputy Commissioner of Public Works.

Regina.

SIR,—At your request for an early report I have the honour, as Inspector of Coal Mines, to submit to you the following report on the coal mines of the North-West Territories for the year ending 31st December, 1903.

The number of productive or shipping mines has increased considerably during the past twelve months, the total number on the list being eighty-eight.

This figure is larger than the number of mines now in operation as a few of these listed have been abandoned and others released, causing a duplication of the numbers. These, however, are small mines that have been opened out on the banks of a river or coulee, the larger and more productive mines are all in active operation. These are:

The Alberta Railway & Coal Co., Lethbridge, Alta., No. 3 shaft.

The H. W. McNeill Co., Ltd., Canmore, Alta., No. 3 incline slope.

The H. W. McNeill Co., Ltd., Anthracite, Alta., No. 1 incline slope.

The Souris Coal Mining Co., Ltd., Coalfields, Assa., No. 2 incline slope and Nos. 1 and 3 adit levels.

The Canadian American Coal & Coke Co., Frank, Alta., No. 1 adit level, No. 2 adit level, No. 3 shaft.

The United Coal Fields Co., Ltd., Lille Collieries, Frank, Alta., No. 1, 2 and 3 adit levels.

The Western Canada Collieries, Ltd., Bellevue, near Frank, Alberta, No. 1 a lit level at Bellevue and No. 1 and 2 adit levels at Byron Creek.

The International Coal & Coke Co., Ltd., at Coleman four miles west of Blairmore, Alta., No. 1 adit level.

The C.P.R. Mining & Metallurgical Department, Banff, Alta., No. 1 and 2 adit levels.

The C.P.R. Mining & Metallurgical Department, Bienfait, Assa., No. 1 incline slope.

The Edmonton Coal Co., Ltd., Edmonton, Alta., No. 1 and 2 adit levels.

Messrs. Breckenridge & Lund, Cowley, Alta., No. 1 adit level.

The Eureka Coal & Brick Co., Estevan, Assa., No. 1 adit level.

The other mines at Edmonton, Red Deer, Knee Hill, High River, Medicine Hat, and Estevan are comparatively small, employing from two to eight men, and only producing coal in the winter season. The foregoing principal coal operators have, during the past year, made some improvements at their mines for the safety of their employees and the more economical production of coal. The Alberta Railway & Coal Co. have installed an endless rope drive on their fan which has increased its capacity by $33\frac{1}{3}$ per cent., and with a larger engine this can be doubled as the fan is capable of producing a much larger quantity than at present required. A new air compressor has been built so that more mining machines can be put to work and the output increased. The endless rope underground haulage has been extended as the workings advanced so curtailing the auxiliary horse haulage. The output of the colliery has been constant nearly the whole year and will I think top the production of any previous year.

The H. W. McNeill Co., Ltd., at Canmore, have installed an air compressor plant which has very materially assisted in the ventilation of their mine. Underground hoist and pumps, all being driven by compressed air, have done away with the heating of the air in certain parts of the mine. The compressed air is being used to run the drills in rock tunnels assisting in speedier development. The company have also been prospecting to the east of their present location with the idea of opening up a new colliery. The mines of this company at Anthracite have been closed down the greater part of the year on account of litigation, but have again been opened up with the idea of taking out the pillars and abandoning the property entirely.

The Souris Coal Mining Company have also been improving their colliery by sinking new air shafts and increasing the furnace ventilation. A hoisting engine has been put in place at No. 2 slope doing away with horse haulage up the short incline plane. This has increased the capacity of the mine and the output of the colliery has doubled within the past twelve months. This company has bought a locomotive to run on their branch from the main line of the Soo, thus avoiding delays in shunting cars at the mine. The demand for this lignite coal has increased rapidly, no doubt owing to its cheapness and the large influx of settlers into the country.

The Canadian-American Coal and Coke Company have had rather an unfortunate year on account of the sliding of Turtle Mountain sweeping out their entire plant and necessitating the re-opening of the mine and installing a new plant. With the characteristic energy of this

company, however, they immediately set about this work and in the course of two months after the disaster were again shipping a fair tonnage. This was done by opening a new adit level on the north side of the track and sinking a shaft near the townsite, both producing coal in a short time. At the old mine an electric lighting plant has been installed so that night work may be carried on; also a picking belt has been put in place.

The United Coal Fields Company at their Lillie collieries, eight miles north of Frank, were also unfortunate to have two miles of their branch line wiped out by the Frank slide. This necessitated the building of switch back sidings up the creek, to make a new connection with their branch line. The work was difficult and expensive, but once overcome they were ready to ship coal. This company have now three openings about two miles apart and their output is about 400 tons daily. A battery of fifty solve ovens has been completed and very soon they will be shipping coke from this point.

The Western Canada Collieries, Ltd., is a new company backed by French capital. Large coal areas have been secured on Byron Creek, six miles south of Frank, at Bellevue two and a half miles east of Frank and also at Blairmore. The mine at Bellevue has been opened and shipped a few cars of coal. At Byron Creek the coal has been tested, a railway surveyed and the right of way partly cleared. The property at Blairmore has just recently been acquired and prospecting work is now going on with a view to opening out at an early date. The International Coal & Coke Company is also another new institution located at Coleman, four miles west of Blairmore on the Crow's Nest Line of the C.P.R. This company has secured a large tract of coal land and done a lot of prospecting. Proving the coal for coking purposes by building two bee hive ovens and the test has proved satisfactory. The company are now building their sidings and in the spring expect to have their mine workings far enough advanced to ship a quantity of coal and also supply their coke ovens which are in the course of construction.

The C.P.R. Mining & Metallurgical Department have opened a mine about five miles from Banff and on the strike of the Anthracite veins. Two seams have been opened up and the coal test is equal to the anthracite mines. This coal will be put on the market as soon as the screening and sorting plant is in operation. This same company opened a mine a few miles north of coalfields, but as yet have not started shipping.

The Edmonton Coal Co. have acquired two properties in the vicinity of Edmonton, and have machinery on order, so that in a few months their mines should be able to supply nearly all the wants of the district.

Messrs. Breckenridge & Lund have opened a mine five miles west of Cowley on the line of the Crow's Nest. At present they are driving a main and counter level to a point close to the railway when a shaft will be sunk and the mine opened out in a systematic manner.

The Eureka Coal & Brick Co. have built a branch into their property from the Soo line and are erecting their screening plant. The brick plant in connection with this property is of the most modern type.

Accidents.

Again we have to record a number of fatal accidents although the percentage of deaths to the number of men employed and tonnage of coal mined, is considerably less than in the previous twelve months,

The total number of fatal accidents in coal mines was five, four occurring at Canmore and one at Frank. Joe Bobeck, Canmore, killed by fall of rock January 7th. H. Broomhead, Frank, burned by a slight explosion of gas on March 28th, died April 1st. Alexander and Thomas Pickering, Canmore, suffocated by an outburst of gas 9th April. William John Davies, fire boss, Canmore, killed by an explosion of gas August 11th.

Outside of the mines but in close proximity to them we had the dreadful catastrophe of the 29th April at Frank. In this slide eighty-three were supposed to have lost their lives and of that number about twelve were working around the tippie when the accident took place.

Another fatal accident occurred to Hugh Brown on the branch line to Coalfields mine on September 22nd, death taking place on the 24th. There have also been reported four serious accidents and six slight accidents, but these do not cover all the minor accidents occurring. Many of them are not reported to the management by the under officials, but this difficulty is being gradually got over by impressing the necessity of complying strictly with The Coal Mines Regulations Ordinance. I have generally tried to appeal to the medical practitioners of the several collieries to start ambulance classes, but as yet have failed, the feeling being that the mining class is so migratory that lectures on first aid to the injured would not be appreciated.

Work of Inspection.

This work has been materially increased during the past twelve months. The number of mines added to the list was more than double any previous year. A regular round of inspection of the collieries in the several districts has been made every alternate month, more time being devoted to the larger collieries. The number of large companies now operating will necessitate more time being spent among them and the smaller mines probably only visited four times a year. This I think would probably do now, as they have all come to the conclusion that it is easier to work a mine in compliance with the laws than in a slipshod manner when they had to reopen a new mine every winter. After each round of inspection to the several collieries a report has been sent to the department and the suggestions made through them to the management of the mines have been carried out in all instances.

Examinations.

During the year examinations were held at Canmore (2), Lethbridge, Coalfields, Anthracite and Frank. The greater number of candidates passed, some of them passing a very superior examination. The certificates issued were three mine managers, three pit boss, and ten fire boss. Some time ago it was a very difficult matter to obtain the services of a pit or fire boss, as there were few in the Territories holding a certificate and the wage inducement was not enough. Now that the number has been increased I consider the examination should be made more thorough and searching; in fact the whole system of examinations changed. This of course will necessitate an amendment to The Coal Mines Regulations Ordinance in the formation of the board, which might be made a central board of five selected, two mine managers, two miners, and the inspector to sit at two different points once a year.

Coal Mining Prospects.

This past year has been very active in the formation of new colliery companies, and every one of them with good solid backing. The properties have been acquired and active operations commenced. The Frank-Blairmore district is the point at which most activity has been shown. The United Coal Fields Co. has developed largely and built coke ovens of the most modern type. The Western Canada Collieries Co. has been formed, acquired property and started shipping coal to the market. The International Coal and Coke Co. has also been formed and started operations. Other companies have also been formed to develop this marvellous field of wealth. At Lethbridge improvements are being made yearly so that the output can be nearly doubled. Coal mining in the Edmonton district has taken another turn, one company at least being formed to acquire and operate a large tract of coal land. This is a step in the right direction, when the output of one or two collieries will be able to supply the district and so be much easier kept under control than thirty or forty small mills in operation. Mining at Canmore still shows an advancement and there is now a great possibility of the coal being opened up to the east of the present location. The opening of an anthracite coal mine within five miles of Banff by the C.P.R. has set at rest all the uneasiness that was caused in the early part of the season by the false alarm that there was going to be a coal famine in the west. The tide of immigration still flows freer than ever causing a demand for coal in the Estevan district that was not dreamt of a few years ago. The old company has up to date more than doubled their output in twelve months, and other companies have entered the field who will soon place coal in the market. Small coal mines have also been opened up at different points in the Territories to supply the settler. There is very little doubt, when the country is thickly settled and the country prospected for coal, the settler will have but a short distance to go to provide himself with fuel at a very reasonable cost.

I have the honour to be, sir,

Your obedient servant,

FRANK B. SMITH, B.Sc.,

Inspector of Coal Mines.

THE STEAM BOILERS ORDINANCE.

Inside staff	} 1 clerk in charge.
Outside staff.....	} 1 stenographer.
	4 inspectors.

The work in connection with the administration of The Steam Boilers Ordinance shows an increase over that of the former year in keeping with the other administrative work of the department. As has already been alluded to one clerk and stenographer have largely had charge of this work in the department, while four inspectors, as in the past, have had charge of the inspection of boilers and the holding of examinations. Their names and addresses are as follows:

Wm. M. Carment.....	Yorkton.
Wm. Waller	Whitewood.
Wm. Mayhew.....	Whitewood.
Jos. Buxton.....	Calgary.

The following schedule illustrates very clearly the work performed under the provisions of this Ordinance during the past year.

SCHEDULE showing increase of work in connection with The Steam Boilers Ordinance.

	1902	1903	Increase
Number of steam boilers inspected.....	803	1,125	322
Number of examinations of engineers held . . .	114	178	64
Number of first class engineer's certificates issued	1	5	4
Number of second class engineer's certificates issued	22	39	17
Number of third class engineer's certificates issued.....	116	144	28
Number of provisional certificates of qualification issued	332	410	78
Number of permits for operation of steam boilers issued	31	42	11
Fees collected :			
For inspection of boilers	\$3,890.00	\$5,680.00	\$1,790.00
For examination of engineers and final certificates issued in lieu of certificates held	432.00	663.00	231.00
For provisional certificates	996.00	1,242.00	246.00
For permits for operation of steam boilers . .	93.00	126.00	33.00
Totals	\$5,411.00	\$7,711.00	\$2,300.00

From the above schedule it will be noted that the number of boilers inspected is in excess of that inspected in the former year by 332, while 64 more examinations for engineers were held and an increased number of certificates of all classes was issued. \$2,300.00 more fees were received than in the former year.

Notwithstanding the large number of steam boilers operated in the Territories, a large percentage of which belong to steam threshing outfits, it is exceedingly gratifying to have to report that no accidents worthy of being reported occurred and, no doubt, great credit is due to the efficient manner in which the inspectors of the department have performed their duties. It is also gratifying to know that less objection is being offered by owners of steam boilers to the work of inspection and the payment of the fee therefor than in former years.

It is quite probable that one or perhaps two more inspectors will have to be appointed within the coming year owing to the rapid settlement of the country and the consequent increasing number of boilers and engines in operation.

At the second session of the Legislative Assembly, held in November, two important amendments were made to The Steam Boilers Ordinance with reference to the date of expiration of inspection certificates and the granting of provisional certificates. Section 12 of the Ordinance of 1901 was amended by adding thereto the following: "Such inspection certificate shall be *prima facie* evidence of the due inspection of the boiler and of its fitness to be operated and the possession of such certificate shall authorise the operation of such boiler from the date of such certificate until its inspection the next following year." It is anticipated that this amendment will overcome the

difficulties experienced in making an inspection subsequent to the first inspection at a date prior to the date when the certificate of inspection in the possession of the owner of a boiler expired.

Section 29 of the Ordinance, which had reference to the method to be followed by applicants for provisional certificates, was repealed and another section substituted therefor. Applicants for this class of certificate have now recourse to two methods,—(1) either by showing to the satisfaction of the commissioner that they have been engaged in the operation of a steam boiler or boilers for two years before the date of the application and producing a satisfactory certificate as to their good conduct and sobriety from the persons by whom they were employed or some other reliable person; or (2) by producing satisfactory evidence that they had at least one year's such experience accompanied by a certificate from an inspector of steam boilers that they had been examined in the theory and practice of operating a steam boiler and had been found duly qualified. Provision is also made for the issue of a second provisional certificate, good for a further period of one year from the date of its issue, but before such certificate can be issued it will be necessary for an applicant to be examined in accordance with the provisions of Section 31 of the Ordinance which provides for the method of obtaining a final certificate. In the event of an applicant failing to pass this examination he may, upon the recommendation of the inspector, receive a second provisional certificate upon the payment of an additional fee of \$3.00.

The following shows the form of application for a provisional certificate:

Application for Provisional Certificate of Qualification as an Engineer.

To the Commissioner of Public Works, ... 190....
Regina, Assa.

(A)

I, ... of
do solemnly declare, that I have been in charge of and operating the steam boiler and engine connected therewith belonging to of
for a period of years prior to this date, and I make application to be granted a Provisional Certificate of Qualification as an Engineer, under the Provisions of The Steam Boilers Ordinance, 1901 and amendments thereto, and to be duly recorded as the holder of such certificate.

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the Canada Evidence Act, 1893.

Declared before me at
in the District of
this day of 190..

.....
A Commissioner, &c., N.W.T. (or J.P.)

(This Blank should be filled out and signed by Employer of Applicant, or some other reliable person.)

(B)

I, ... of
do solemnly declare that the above named
has been engaged for a period of years, prior to the date of his application, in operating the steam boiler and engine connected therewith belonging to of During that time he has proved himself a thoroughly qualified person to operate a steam boiler, and by his good conduct and sobriety is in my opinion entitled to a Provisional Certificate of Qualification as an Engineer.

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the Canada Evidence Act, 1893.

Declared before me at.....)
in the District of.....)
this..... day of..... 190..)

.....
A Commissioner, &c., N.W.T. (or J.P.)

NOTE.—It is necessary that a fee of \$3.00 be forwarded to the Department with this application.

Arrangements were made at the end of the year for a joint meeting of the inspectors to be held at Regina for the purpose of revising the examination papers for the different classes of certificates and for the purpose of enabling them to compare notes on the workings of the Ordinance in their several districts.

The annual reports from the several inspectors and the schedule of those holding certificates of competency under the Ordinance are appended hereto.

YORKTON, 31st December, 1903.

B. J. SAUNDERS, Esq.,
Deputy Commissioner of Public Works,
Regina, Assa.

SIR,—I hav the honour to submit my annual report as Inspector of Steam Boilers for the year 1903.

During the past season I have inspected 241 boilers of which number 95 came into the district this year. These boilers may be described as follows :

Types.

Locomotive firebox.....	138
Return tubular.....	66
Firebox return tubular.....	9
Horizontal tubular.....	25
Upright tubular.....	2
“ sectional.....	1
Total.....	—241

Condition.

Good.....	198
Fair.....	40
Poor.....	3
Number of boilers requiring repairs.....	69
“ “ condemned.....	2
“ engineers examined.....	47
“ permits issued.....	17
“ new boilers inspected.....	95
“ miles travelled on inspection work.....	6,927

The boilers ranged in capacity from 5 to 95 horse power and were used for the following purposes:

Operating flour mills.....	8
“ grain elevators.....	8
“ creameries.....	5
“ sash and door factories.....	2
“ brick yards.....	2
“ pork packing factory.....	1
“ agricultural purposes.....	215

There has been a steady improvement in the condition of the boilers in my district which, without doubt, is largely due to the inspection they receive, many defects and weaknesses being discovered and remedied which would otherwise be a source of danger both to the owners and to the public.

The scarcity of qualified engineers referred to in previous reports still continues, and is due to the rapid increase in the number of engines and boilers coming into the district. For this reason I found it necessary to grant a number of permits to operate threshing outfits which otherwise would have had to shut down through being unable to obtain qualified engineers. There have been no accidents reported to me during the past year.

I have the honour to be, Sir,

Your obedient servant,

W. M. CARMENT,
Inspector of Steam Boilers.

WHITEWOOD, Jan. 1st, 1904.

B. J. SAUNDERS, Esq.,

Deputy Commissioner of Public Works,
Regina, Assa.

SIR,—I have the honour to submit to you my annual report as Inspector of Steam Boilers for the year ending 1903 as provided by The Steam Boilers Ordinance of the North-West Territories.

On March the 15th I received instructions to proceed to Battleford to superintend the overhauling of the steam ferry and put her in commission for the season. I must say some difficulty was experienced in getting the repairs to hand at the time they were required.

In my report I advised that material be got for the wood work for a new wheel, and that it be got to provide ample time so as that the arms and braces can be well fitted, as the life of the wheel greatly depends on this.

The red lead that was to paint the scows from the water line up came too late, and in consequence it was not done. The upper part of the boat was painted, but owing to the supplies being delayed it was not finished as I would have liked to have seen it before the boat was put into the river for the season. The boat was launched as soon as the river was clear of ice and everything was satisfactory, after which I commenced with the inspection of steam boilers. The number of boilers has increased very rapidly. I have inspected 285. The following is a statement of the different classes and their condition.

Locomotive type traction.....	134
" " portable.....	40
Return tubular traction.....	34
" portable.....	11
" stationary.....	1
Tubular.....	51
Upright tubular portable.....	3
" stationary.....	6
Locomotive fire box and return tubular portable.....	4
" " " stationary.....	1
Total.....	—285

Sixty-one of these were not inspected before, 236 were in good condition, and 49 were in fair condition.

I have no casualties to report.

There have been several reports sent to the department *re* engineers operating boilers without being in possession of a certificate, but it is impossible for the inspector to be at Regina and Prince Albert at the same time to look after these things.

Have had very few complaints and very little friction during the past year.

I have the honour to be, Sir,

Your obedient servant,

WM. WALLER.

Inspector of Steam Boilers.

CALGARY, Jan. 1st, 1904.

B. J. SAUNDERS, Esq.,

Deputy Commissioner Public Works,

Regina, Assa.

SIR,—I have the honour to submit my annual report for the year 1903 as Inspector of Steam Boilers in accordance with the provisions of The Steam Boilers Ordinance, Section 19.

The number of boilers inspected by me during the past year is 323, and there are 13 additional ones already on the grounds to be placed in position and put in operation.

Description of Boilers Inspected.

Locomotive fire box.....	122
Horizontal tubular.....	85
Return locomotive fire box.....	10
“ tubular.....	58
“ flue.....	4
Upright tubular.....	38
“ sectional.....	8
Lancashire type.....	1
Total.....	—326

Condition of Boilers Inspected.

Good.....	265
Very fair.....	50
Fair.....	8

Repairs were ordered on 25 boilers and when completed put the same boilers in good condition. Some of the repairs were very heavy, jobs such as new tube sheets, main flue, and part new shell of boilers which was found to be so thin that the above repairs were necessary.

There was one accident reported to me from Red Deer which proved fatal. After careful investigation I found that the party was trying to put on a belt while the machinery was in motion and got caught. He had been cautioned several times by the engineer in charge.

During the past year I held examinations at several points in Alberta.

Applicants for First Class.....	3
“ “ Second “.....	17
“ “ Third “.....	38 including
apprentices. Of this number who took the examination there graded as follows:	
1st Class.....	1
2nd “.....	9
3rd “.....	29
Failed.....	19

There has been a scarcity of qualified engineers during this season's work among the threshermen, and I had several applications for permits made to me, of which I only issued four. There have been two prosecutions in my district this year for the violation of Section 37.

Judging from the amount of correspondence in regard to the examination to be held this year there will be quite a number to write for final certificates in 1904.

I have the honour to be, Sir,

Your obedient servant,

JOSEPH BUXTON,
Inspector of Steam Boilers.

WHITEWOOD, ASSA., Dec. 31st, 1903.

B. J. SAUNDERS, Esq.,
Deputy Commissioner of Public Works,
Regina, Assa.

SIR,—I have the honour to submit my annual report as Inspector of Steam Boilers for 1903 in accordance with The Steam Boilers Ordinance.

I was working as assistant to Mr. W. M. Carment until July, when I was taken on the regular staff, and given the south-eastern part of Assiniboia as my district. The boilers I have inspected during the year may be classed as follows:

Return tube portable	32
“ “ traction	29
Locomotive portable	66
“ “ traction	113
Stationary tubular	16
“ “ locomotive	3
“ “ vertical	3
Vertical traction	1
Total.....	—263

240 of this number were in good condition, 21 fair, 1 poor, and 1 bad. Various repairs were ordered on 15 boilers, new safety valves on 5, and new steam gauges on 9.

106 boilers came into my district this year, 86 new and 20 that had been in use before they came into the Territories. Some of the old boilers were laid aside, which accounts for so many new ones being brought in.

Three boilers were carrying more steam than is allowed by the Ordinance, Section 24. Two of these had 25 lbs. more steam than their steam gauge registered, the steam gauge being this 25 lbs. out.

I have examined 28 candidates for engineer's certificates. Some of this number failed to obtain their certificates because they had not filed their notice of apprenticeship with the Government. This rule does not seem to be understood by those wishing to qualify for engineers.

Owing to the increased number of boilers in the district, engineers with certificates were not to be had to operate them all, so I had to issue permits to 17 men to allow them to operate boilers and engines legally.

No accidents or casualties have occurred in my district during the year. Several complaints have been made to me by owners of steam boilers about some of the certificated engineers. It seems these men were able to pass an examination, but when they were given charge of

an engine they were practically lost for want of experience. I always recommend young engineers to try and get into the shops for a time where machinery is made and repaired.

I have the honour to be, Sir,

Your obedient servant,

WM. MAYHEW,

Inspector.

SCHEDULE of Holders of Certificates of Qualification under The Steam Boilers Ordinance.

NAME	ADDRESS	DATE OF ISSUE
<i>First Class.</i>		
Archibald, Harry P.	Lethbridge	15 August, 1900
Allan, John S. B.	Broadview	7 August, 1903
Brissette, Narcisse.	Morinville	28 March, 1899
Bell, John	Prince Albert.	"
Buxton, Joseph.	Calgary.	29 August, 1901
Cross, William	Calgary.	28 March, 1899
Cook, George	Regina.	"
Carment, William M.	Kamsack.	"
Collison, George.	Coalfields	"
Codd, Ernest F.	Calgary.	5 June, 1900
Cadwell, Marcus D.	Qu'Appelle Station.	18 July, 1901
Caldwell, Robert	Edmonton.	16 October, 1903
Evans, Daniel	Edmonton.	28 March, 1899
Fraser, David	Strathcona	9 October, 1899
Fisher, Frank D.	Fleming	11 April, 1901
Gale, Ernest A.	Calgary.	6 November, 1903
Holden, William J.	Indian Head.	28 March, 1899
Hicks, Robert	Rossetti	24 December, 1900
Heist, William E.	Edmonton	18 December, 1901
Holden, Richard W.	Hednesford.	28 August, 1902
Jackson, John A.	Strathcona	23 October, 1900
Kirkland, Thomas.	Yorkton.	28 March, 1899
Kelly, John.	Edmonton	1 December, 1903
Liston, Robert F.	Battleford	29 March, 1899
LeCain, H. C.	Hyde.	29 January, 1903
Mayhew, William.	Broadview.	28 March, 1899
McNabb, Franklin.	Fort Qu'Appelle.	28 March, 1899
McNaughton, Peter	Edmonton	9 October, 1899
Niven, Robert.	Lethbridge	28 July, 1900
Roop, Warren E.	Moose Jaw	15 November, 1900
Scott, John	Lethbridge	28 March, 1899
Smith, Percy Lewis	Prince Albert.	4 April, 1899
Smith, John McKenzie .	"	"
Sutherland, J. A.	Broadview.	29 September, 1899

SCHEDULE of Holders of Certificates of Qualification under The Steam Boilers Ordinance.—*Continued*

NAME	ADDRESS	DATE OF ISSUE.
<i>First Class—Continued.</i>		
Turgeon, Cleophas.....	Edmonton.....	28 March, 1899
Taylor, George R.....	Strathcona.....	"
Turner, Ornelo H.....	Calgary.....	31 July, 1901
Waller, William.....	Whitewood.....	6 November, 1900
Wilcox, Wellington C.....	Moosomin.....	25 April, 1901
Yates, David.....	Banff.....	5 July, 1901
<i>Second Class.</i>		
Amas, Frank.....	Qu'Appelle Station.....	29 September, 1899
Abbey, Oliver A.....	Moose Jaw.....	29 September, 1900
Abbott, James L.....	Moosomin.....	15 November, 1900
Anderson, C. J. B.....	Calgary.....	7 February 1901
Arnold, Archie F.....	Yorkton.....	16 August, 1901
Angus, Robert.....	Angus Ridge.....	2 October, 1901
Anderson, Seymour A.....	Saltcoats.....	13 July, 1903
Askin, Michael D.....	Arcola.....	14 August, 1903
Bawtinheimer, George H....	Red Deer.....	4 September, 1899
Brayne, Joseph.....	Calgary.....	1 December, 1899
Biery, Charles.....	Strathcona.....	7 March, 1900
Barley, George T.....	Prince Albert.....	28 May, 1900
Brydges, Alonzo H.....	Moosomin.....	30 May, 1900
Bierworth, Ernest.....	Carnduff.....	19 July, 1900
Burke, Fred.....	Gainsborough.....	7 August, 1900
Blachford, K. A.....	Edmonton.....	23 October, 1900
Boyes, Henry.....	Indian Head.....	30 October, 1900
Brown, John E.....	Spy Hill.....	24 December, 1900
Blain, J. W.....	Strathcona.....	31 December, 1900
Blair, Andrew.....	Lumsden.....	23 November, 1900
Bishop, Walter.....	Oxbow.....	20 April, 1901
Bennett, Joseph H.....	Arcola.....	29 May, 1901
Bull, Francis W.....	Yorkton.....	16 August, 1901
Bannerman, James A.....	Red Deer.....	18 December, 1901
Brownlow, Henry A.....	Lacombe.....	23 December, 1901
Bell, Harry J.....	Sintaluta.....	19 February, 1903
Brewster, W. A.....	Edmonton.....	13 May, 1903
Bowden, H. S.....	Strathcona.....	"
Bull, Edmund W.....	Regina.....	28 August, 1903
Cope, Edmund G. M.....	Lethbridge.....	30 June, 1899
Clark, W. Harold.....	Edmonton.....	9 October, 1899
Cumming, Thomas C.....	Whitewood.....	15 November, 1899
Collopy, Alexander.....	Alameda.....	"
Conn, David.....	Lethbridge.....	23 March, 1900
Clow, Charles.....	Ellisboro.....	25 April, 1900
Chalmers, Walter N.....	Edmonton.....	28 May, 1900
Collopy, Thomas.....	Alameda.....	19 July, 1900
Cullen, James E.....	Calgary.....	21 February, 1901
Croft, J. Thomas.....	Carievale.....	15 April, 1901
Codd, Ernest.....	Wapella.....	23 January, 1902
Converse, Stephen J.....	Ponoka.....	6 March, 1903
Clifford, Robert A.....	Strathcona.....	13 May, 1903
Cooper, Thomas.....	Carievale.....	15 September, 1903
Cole, Henry.....	Halbrite.....	24 September, 1903
Donaldson, Maxwell.....	Lethbridge.....	23 March, 1900
Dickson, William.....	Oxbow.....	19 July, 1900

SCHEDULE of Holders of Certificates of Qualification under The Steam Boilers Ordinance.—*Continued.*

NAME	ADDRESS	DATE OF ISSUE
<i>Second Class—Continued.</i>		
Donald, J	Moosomin	29 September, 1900
Dyck, Abraham	Waldheim	20 November, 1900
Dimmick, W. J.	Fleming	24 December, 1900
Darragh, Joseph	Oxbow	20 April, 1901
Drain, William	Prince Albert	30 May, 1901
Doughty, James	Calgary	25 July, 1901
Dash, Frederick J.	Hillesden	29 August, 1901
Dagleish, Thomas	Wapella	"
Evans, Harry W.	Anthracite	13 February, 1900
Eddy, Alexander	Medicine Hat	5 November, 1900
ffolliott, L. H.	Grenfell	29 September, 1899
Fitzgerald, Walter G.	Belle Prairie	25 April, 1900
Lord, William H.	Wideawake	24 January, 1901
Fothergill, Charles	Glen Adelaide	11 April, 1901
Foster, James	Glen Ewen	30 April, 1901
Fletcher, Thomas	Hillfarm	2 July, 1901
Freeman, Manfred	Lethbridge	18 August, 1902
Finch, Robert H.	Calgary	10 October, 1902
Finn, James E.	Fort Qu'Appelle	9 February, 1902
Frame, James F.	Lethbridge	6 October, 1903
Green, George	Moose Jaw	29 September, 1899
Grant, George	Wolseley	25 April, 1900
Goodfellow, Willard R.	Prince Albert	28 May, 1900
Goodman, J.	Moosomin	29 September, 1900
Gibson, Fred A.	"	"
Gamble, Alva H.	Moose Jaw	15 November, 1900
Green, Frederick W.	"	13 December, 1900
Grieve, David	Calgary	7 February, 1901
Gilchrist, Peter	Regina	14 September, 1901
Garratt, Lyle E.	Grenfell	25 August, 1902
Hubbard, Sydney T.	Edmonton	9 October, 1899
Hennigar, Edward J.	"	"
Hamill, Thomas T.	Whitewood	18 November, 1899
Haines, Alfred H.	Edmonton	7 March, 1900
Hillis, Henry	Medicine Hat	23 March, 1900
Humphrys, William	Cannington Manor	19 July, 1900
Holden, Albert	Indian Head	5 September, 1900
Hicklin, John William	Calgary	29 September, 1900
Hoyer, Richard	Hednesford	"
Hiscox, Thomas S.	Regina	"
Hunt, Arthur	Wapella	11 April, 1901
Hames, Alfred A.	Oxbow	20 April, 1901
Howell, Edward	Battleford	30 May, 1901
Honey, James	Maryfield	3 February, 1902
Hillis, Thomas	Lethbridge	18 August, 1902
Hammett, Richard	Wolseley	25 August, 1902
Hardy, Rowan F.	Grenfell	"
Hennig, Michael	Calgary	10 October, 1902
Hanson, Michael	Dundurn	15 May, 1903
Heimer, Frank A.	Moosomin	1 October, 1903
Jones, Frederick W.	Strathcona	9 October, 1899
Judd, David H.	Calgary	5 October, 1901
Jones, William C.	Indian Head	4 October, 1902
Keenan, James S.	Moosomin	21 March, 1900
Kerr, William	Lethbridge	23 March, 1900

SCHEDULE of Holders of Certificates of Qualification under The Steam Boilers Ordinance.—*Continued.*

NAME	ADDRESS	DATE OF ISSUE
<i>Second Class—Continued.</i>		
Kidd, Frederick	Calgary	14 June, 1900
Keith, John	Fitzmaurice	14 August, 1900
Kowalczyck, Antoine	St. Paul des Metis	16 February, 1901
Kearns, William	Qu'Appelle Station	26 August, 1901
Kohlruss, Johann	Balgonie	30 August, 1901
Kennedy, Edwin R.	Portal, N.D.	27 August, 1903
Lyon, William	Moffat	5 September, 1900
Laidlaw, Robert	Grenfell	24 December, 1900
Lapp, Charles T.	Alameda	20 April, 1901
Lacey, William R.	Calgary	10 October, 1902
Lamoureux, Alphonse	Lamoureux	18 December, 1902
Lewis, William C.	Wapella	15 September, 1903
Macey, Charles R.	Oxbow	15 November, 1899
More, Robert	Bredenbury	"
Moran, Austin	Lethbridge	23 March, 1900
Morden, Phillip A.	Moosomin	11 April, 1901
Marshall, Charles H.	Carnduff	"
Mitchell, George A.	Abernethy	9 September, 1901
Mulberry, David	Spy Hill	13 September, 1901
Moulding, Charles	Broadview	24 September, 1901
Mitchell, James A.	Oxbow	3 October, 1901
Minty, Charles J.	Ferndale	19 February, 1903
Morrow, James W.	Grenfell	26 February, 1903
Marshall, Frederick J.	Kamloops, B.C.	14 August, 1903
Mitchell, Samuel D.	Percy	"
Moxon, Frederick I.	Sintaluta	22 August, 1903
Morrison, John S.	Gleichen	24 September, 1903
McKay, Daniel	Lethbridge	30 June, 1899
McBeth, William M.	Prince Albert	28 May, 1900
McGee, Thomas	Whitefish Lake	14 June, 1900
McGuirl, John	Moosomin	19 July, 1900
McDougall, John	Regina	28 July, 1900
McEwen, Duncan	"	29 September, 1900
McBride, William L.	Prince Albert	20 May, 1901
McInnis, Neil B.	Regina	21 June, 1901
McKay, Finlay	"	"
McDonald, Allan	"	7 September, 1901
McCurdy, John A.	Moosomin	3 February, 1902
McKenzie, John D.	Oxbow	29 April, 1902
McFayden, John	Wapella	6 March, 1903
McConnell, William J.	Lethbridge	6 October, 1903
Nimmons, Robert	Lethbridge	23 March, 1900
Nesbitt, John	Moose Jaw	29 September, 1900
Neufeldt, Peter P.	Rosthern	20 November, 1900
Osment, Walter J.	Indian Head	25 April, 1900
Omand, James	Edmonton	13 May, 1903
Parcels, Timothy P.	Red Deer	4 September, 1899
Payzant, Ernest M.	Edmonton	9 October, 1899
Pratt, George	"	"
Pearce, Abram	"	28 May, 1900
Pajot, Jacques	Duck Lake	29 September, 1900
Pendygrasse, John S.	Halcro	30 May, 1901
Porter, James	Wolseley	2 July, 1901
Partridge, Thomas E.	Sintaluta	24 September, 1901
Parke, John A.	Churchbridge	1 October, 1902

SCHEDULE of Holders of Certificates of Qualification under The Steam Boilers Ordinance.—*Continued.*

NAME	ADDRESS	DATE OF ISSUE
<i>Second Class—Continued.</i>		
Reed, R. W.	Lethbridge	30 June, 1899
Richards, Henry J.	Canmore.	13 February, 1900
Ritchie, William J.	"	5 June, 1900
Rankin, Thomas H.	Banff	29 September, 1900
Rigby, William.	Tregarva	"
Robb, David M.	Grenfell	9 May, 1901
Rice, John.	Calgary.	10 October, 1902
Rattray, Thomas.	Edmonton	13 May, 1903
Rayner, Wm. J.	Indian Head.	18 November, 1903
Stapley, Tobias B.	Edmonton	4 September, 1899
Schatz, William H.	Strathcona	9 October, 1899
Shaw, Maltman W. S.	Midnapore.	1 December, 1899
Stafford, George.	Lethbridge	23 March, 1900
Steven, James H.	Calgary.	17 April, 1900
Shingler, Chas.	Grenfell	25 April, 1900
Shannon, John W.	Prince Albert.	28 May, 1900
Stephenson, J. W.	Moose Jaw.	13 December, 1900
Shirkie, Andrew S.	Grenfell	24 December, 1900
Stagg, George	Calgary.	7 February, 1900
Steven, Alfred E.	"	"
Shelley, Henry J.	"	12 March, 1901
Scott, Wallace A.	Carlyle	29 May, 1901
Shea, Francis W.	Prince Albert.	30 May, 1901
Sloan, William	Lethbridge	30 July, 1902
Sellars, Walter H.	Arcola.	15 September, 1903
Symington, John F.	Willowbrook	30 September, 1903
Snelgrove, George L.	"	26 September, 1903
Shannon, James.	Calgary.	6 November, 1903
Shackleton, Thomas A.	Kamloops, B.C.	14 November, 1903
Springstein, Cecil B.	Regina	19 December, 1903
Thompson, R. D.	Wolseley	13 November, 1899
Turner, Ornelo H.	Calgary.	13 February, 1900
Toreson, Thomas	Wetaskiwin	7 March, 1900
Tompkins, Peter.	Whitefish Lake.	27 November, 1900
Topp, Edron.	Carnduff.	6 May, 1902
Thompson, John	Port Arthur, Ont.	30 August, 1902
Tulloch, A. J.	Broadview	6 March, 1903
Terry, William F.	Saskatoon	15 May, 1903
Verey, George W.	Prince Albert.	28 May, 1900
Vance, George W.	Moosomin	11 April, 1901
VonWendel, Carl	Calgary.	6 November, 1903
Walker, J. B.	Lethbridge	30 June, 1899
Watson, Ernest P.	Strathcona	9 October, 1899
Walters, Bertrand	Grenfell	25 April, 1900
Winter, Robert S.	Wapella.	"
Workman, Walter R.	Oxbow.	19 July, 1900
Wood, Charles E. D.	Macleod	28 July, 1900
White James.	Canmore.	5 September, 1900
Wiebe, William R.	Rosthern	20 November, 1900
White, William J.	Moose Jaw	13 December, 1900
Wright, Leslie	Gainsborough	15 April, 1901
Wiggins, James T.	Oxbow.	20 April, 1901
Websdale, Francis C.	Edmonton.	21 June, 1901
Watson, Hugh C.	Oxbow.	3 September, 1901
Waldock, John G.	Medicine Hat	18 August, 1902
Waterfield, Thomas A.	Yorkton.	1 October, 1902

SCHEDULE of Holders of Certificates of Qualification under The Steam Boilers Ordinance.—*Continued.*

NAME	ADDRESS	DATE OF ISSUE
<i>Second Class—Continued.</i>		
Weeks, Albert G.....	Regina.....	6 June, 1903
Wallace, William.....	North Portal.....	15 September, 1903
Wood, John A.....	Weyburn.....	19 November, 1903
<i>Third Class.</i>		
Aldous, Robert B.....	Lorlie.....	29 September, 1899
Armstrong, Charles W.....	Gainsborough.....	15 April, 1901
Adams, George A.....	Carnduff.....	17 April, 1901
Albertson, Andrew O.....	Strathcona.....	25 June, 1901
Aikman, George.....	Calgary.....	11 September, 1902
Andres, Gerhard J.....	Rosthern.....	26 September, 1902
Anderson, David.....	Elmore.....	14 October, 1902
Anderson, William.....	Indian Head.....	19 February, 1903
Allan, Albert.....	Edmonton.....	13 May, 1903
Alexander, Anthony.....	Duck Lake.....	13 June, 1903
Allison, Robert.....	Pasqua.....	22 August, 1903
Anderson, Henry C.....	Regina.....	16 September, 1903
Alexander, Andrew W.....	Yorkton.....	30 September, 1903
Black, Walter M.....	Wolseley.....	29 September, 1899
Brown, Frank.....	Indian Head.....	"
Blatchford, Peter.....	Edmonton.....	28 November, 1899
Bergeron, Joseph.....	Fort Saskatchewan.....	28 May, 1900
Ballantyne, Archibald.....	Prince Albert.....	"
Brears, Edward.....	Clumber.....	24 August, 1900
Burkman, John A.....	Whitewood.....	5 September, 1900
Beesley, John W.....	Marlborough.....	13 December, 1900
Bonnycastle, Thomas.....	Katepwe.....	24 December, 1900
Barnes, Zechariah H.....	Verna.....	5 March, 1901
Burman, George W.....	Wapella.....	29 August, 1901
Bushby, Joseph.....	Lumsden.....	7 September, 1901
Badley, James.....	Pense.....	9 September, 1901
Barber, Samuel R.....	Wolseley.....	24 September, 1901
Burke, Alfred H.....	Elmore.....	3 October, 1901
Boyce, H. F.....	Qu'Appelle Station.....	21 November, 1901
Burman, Charles D.....	Qu'Appelle Station.....	"
Bawtinhaimer, H. E.....	Red Deer.....	18 December, 1901
Bannerman, William.....	Red Deer.....	"
Billo, Joseph.....	Edmonton.....	"
Bernier, Alexis.....	Lamoureux.....	"
Bastien, Henry.....	Prosperity.....	23 January, 1902
Brook, James.....	Moosomin.....	3 February, 1902
Brook, Edward.....	Fairville.....	18 August, 1902
Berlinguette, Alfred.....	Whitford.....	"
Breckenridge, Robert S.....	Rosthern.....	25 August, 1902
Blair, John.....	Indian Head.....	"
Bossard, Walter W.....	Weyburn.....	21 November, 1902
Beard, William W.....	Moosomin.....	6 March, 1903
Barber, Richard.....	Wolseley.....	9 March, 1903
Burwell, Arthur P.....	Edmonton.....	24 April, 1903
Berg, John.....	Fort Saskatchewan.....	13 May, 1903
Bolduc, Joseph.....	Beaumont.....	"
Bowers, Richard J.....	Strathcona.....	"
Briggs, Marshall R.....	Red Deer.....	"
Beal, Alonzo.....	Davidson.....	3 July, 1903
Boyles, Geo. H.....	Moosomin.....	7 August, 1903
Bateman, William R.....	Eastview.....	14 September, 1903
Bonar, Alfred.....	Moose Jaw.....	"
Buell, Charles W.....	Lumsden.....	"

SCHEDULE of Holders of Certificates of Qualification under The Steam Boilers Ordinance.—*Continued.*

NAME	ADDRESS	DATE OF ISSUE
<i>Third Class—Continued.</i>		
Brown, William	Broadview.....	16 September, 1903
Bishop, William F.....	Alameda.....	"
Beaton, Norman	Gordon	"
Bricker, Menno C.....	Okotoks.....	6 November, 1903
Brown, Robert S.....	Lamoureux.....	15 January, 1904
Burbank, Lyle A.....	Calgary.....	10 February, 1904
Currie, Laughlin	Strathcona	9 October, 1899
Cameron, John	Edmonton	"
Clement, Lewis J.....	Carnduff	15 November, 1899
Cross, William	Crescent Lake.....	"
Cooper, Watt	Canmore.....	13 February, 1900
Carscadden, F. W.....	Strathcona	7 March, 1900
Clements, Charles H.....	Fairmede.....	25 April, 1900
Chute, Clarence	Pasqua	15 October, 1900
Campbell, Thomas	Prince Albert.....	10 November, 1900
Clink, George J.....	Lacombe.....	31 December, 1900
Campbell, Michael	Canmore.....	25 June, 1901
Campbell, John R.....	Qu'Appelle Station.....	18 July, 1901
Christian, John E.....	Prosperity.....	29 August, 1901
Chieard, Victor.....	Sintaluta.....	24 September, 1901
Cook, Thomas H.....	Regina	23 November, 1901
Cruikshank, Charles.....	Red Deer.....	18 December, 1901
Clauson, John	Red Deer.....	23 April, 1902
Cudmore, Everard J.....	Westview.....	7 August, 1902
Currie, William	Medicine Hat	18 August, 1902
Charvet, Eugene	Duck Lake.....	26 September, 1902
Currie, George D.....	Regina.....	1 October, 1902
Chase, William	Wapella.....	10 October, 1902
Carefoot, William J.....	Moosomin	"
Cameron, Malcolm G.....	Dalesboro.....	13 May, 1903
Cameron, Alexander	Carlyle	14 August, 1903
Currie, Archibald	Medicine Hat	22 August, 1903
Cargo, Hugh L.....	Fort Qu'Appelle.....	"
Clancy, Jacob W. W.....	Regina.....	14 September, 1903
Crawford, Alvy	Saskatoon.....	30 September, 1903
Chandler, Frederick W.....	Fleming.....	6 November, 1903
Collard, John A.....	Moose Jaw.....	20 January, 1904
Dash, Albert	Grenfell.....	29 September, 1899
Dixon, William	Sintaluta	"
Doan, John	Regina.....	5 September, 1900
Doman, Frederick	Moosomin	21 February, 1901
Dalrymple, Archy	Moose Jaw.....	8 August, 1901
Dargavel, A. M.....	Wolseley	24 September, 1901
Downey, Jeremiah	Summerbury	27 August, 1902
Dyck, Francis G.....	Hague.....	26 September, 1902
Delap, Thomas	Frank	30 September, 1902
Dalgleish, Andrew	Moosomin	7 August, 1903
Donald, Alexander	Wolsley	22 August, 1903
Dorrell, Henry	Moose Jaw	"
Demele, August	Qu'Appelle Station.....	3 September, 1903
DuBois, Roy C.....	Dundurn	5 September, 1903
Dozoy, Charles.....	Frank.....	30 September, 1903
Duncan, Thaddeus W.....	Halbrite.....	10 October, 1903
Ellerman, Emil.....	Hyde.....	13 February, 1900
Embury, J. R.....	Wapella.....	29 September, 1900
Erickson, John	Wetaskiwin	23 October, 1900
Engelland, Frederick C.....	Edenwold.....	27 August, 1901

SCHEDULE of Holders of Certificates of Qualification under The Steam Boilers Ordinance.—*Continued.*

NAME	ADDRESS	DATE OF ISSUE
<i>Third Class—Continued.</i>		
Ellis, John.....	Weldon.....	15 October, 1901
Edgington, Guy.....	Red Deer.....	18 December, 1901
Egaard, Anton F.....	Oxbow.....	13 October, 1902
Eyre, William F.....	Regina.....	13 May, 1903
Emberton, Julius.....	Prince Albert.....	23 June, 1903
Evarts, Lucius P.....	Calgary.....	14 August, 1903
Edberg, Elof O.....	Langenburg.....	4 November, 1903
Fotheringham, James.....	Grenfell.....	29 September, 1899
Fletcher, Alexander.....	Moose Jaw.....	"
Faulkner, Gilbert W.....	Grenfell.....	25 April, 1900
Fitzgerald, Gerald D.....	Belle Prairie.....	"
Forsyth, George.....	Prince Albert.....	28 May, 1900
Ferguson, William.....	Moffat.....	5 September, 1900
Finn, James E.....	Fort Qu'Appelle.....	23 November, 1900
Fowler, James Park.....	Moose Jaw.....	13 December, 1900
Flett, John.....	Flett's Springs.....	30 May, 1901
Friesen, Isaac P.....	Rosthern.....	"
Fryn, Samuel.....	Coalfields.....	28 June, 1901
Fristad, George.....	Gainsborough.....	27 August, 1901
Fleming, Samuel.....	Wolseley.....	24 September, 1901
Flack, Samuel.....	Red Deer.....	18 December, 1901
Findlay, James F.....	Leduc.....	"
Ferguson, William H.....	Oxbow.....	28 April, 1902
Fair, Francis W.....	Medicine Hat.....	18 August, 1902
Freed, Joseph H.....	North Portal.....	30 August, 1902
Forge, James.....	Moose Jaw.....	30 September, 1902
Fergus, David M.....	Yorkton.....	1 October, 1902
Fraser, William.....	Strathcona.....	13 May, 1903
Foster, William W.....	Red Deer.....	"
Falkingham, Joseph.....	Hanley.....	14 August, 1903
Foster, John T.....	Moose Jaw.....	1 September, 1903
Foulkard, Albert F.....	Pense.....	14 September, 1903
Fieseler, William.....	Langenburg.....	6 October, 1903
Friesen, Jacob.....	Rosthern.....	16 October, 1903
Fraser, Charles.....	Okotoks.....	6 November, 1903
Fletcher, George C.....	Pense.....	27 November, 1903
Getty, Samuel.....	Moose Jaw.....	29 September, 1899
Gagnon, Alfred.....	St. Albert.....	28 May, 1900
Gray, William.....	Clumber.....	24 August, 1900
Godson, Charles.....	Fairville.....	29 September, 1900
Grue, Theodore S.....	Bittern Lake.....	7 December, 1900
Gray, Joseph.....	Qu'Appelle Station.....	18 July, 1901
Gravy, John.....	Hyde.....	29 August, 1901
Gardiner, C. T.....	Balgonie.....	30 September, 1901
Gedge, William J.....	Moosomin.....	14 February, 1902
Gaetz, James F.....	Red Deer.....	23 April, 1902
Gaddes, James.....	Grenfell.....	25 August, 1902
Giesbrecht, Jacob.....	Waldheim.....	26 September, 1902
Giles, William A.....	Rosthern.....	"
Gray, William, Jr.....	Clumber.....	30 September, 1902
Gillis, Murdoch.....	Whitewood.....	10 October, 1902
Gobel, Valentine.....	Hyde.....	24 October, 1902
Gougeon, Xavin.....	Saskatoon.....	29 October, 1902
Guess, Herbert.....	Saltoun.....	19 February, 1903
Grad, Adam.....	Balgonie.....	14 August, 1903
Gilmour, John G.....	Moose Jaw.....	22 August, 1903
Gordon, Sandy.....	Caron.....	29 September, 1903
Gummow, John P.....	Estevan.....	10 October, 1903
George, John.....	Kamloops, B.C.,.....	13 January, 1904

SCHEDULE of Holders of Certificates of Qualification under The Steam Boilers Ordinance.—*Continued.*

NAME	ADDRESS	DATE OF ISSUE
<i>Third Class—Continued.</i>		
Hailey, William	Wolseley	29 September, 1899
Hewer, Jessey J.	Strathcona	9 October, 1899
Halflin, Mark	Wolseley	25 April, 1900
Harrold, David	Edmonton	28 May, 1900
Hawkes, A. G.	Broadview	5 September, 1900
Heffner, Frank	Bruederheim	15 November, 1900
Harms, Peter W.	Rosthern	20 November, 1900
Holden, J. A.	Strathcona	31 December, 1900
Hastings, James	Indian Head	24 January, 1901
Hargest, Richard	Edgeley	18 July, 1901
Holden, Samuel O.	Indian Head	26 August, 1901
Hubbs, Annet	Sintaluta	24 September, 1901
Hourie, James	Prince Albert	15 October, 1901
Hober, John W.	Ponoka	7 January, 1902
Hill, Edmund	Oxbow	28 April, 1902
Houghton, Charles N.	Carnduff	6 May, 1902
Hill, Alfred	Oxbow	"
Halliday, Ninian	Gainsborough	"
Hill, Albert C. M.	Grenfell	25 August, 1902
Hogg, Andrew G.	Carnoustie	10 October, 1902
Harris, Edward S.	Star	18 December, 1902
Hudson, Arthur C.	Edmonton	6 January, 1903
Hubbs, Charles	Sintaluta	19 February, 1903
Hannah, George W.	Sintaluta	26 February, 1903
Havegaard, Rasmus T.	Whitewood	6 March, 1903
Hehsdoerfer, Joseph	Edmonton	13 May, 1903
Heatley, William	Beaumont	"
Hopkins, James E.	Moose Jaw	22 August, 1903
Harrop, William	Indian Head	"
Henderson, George A.	Halbrite	27 August, 1903
Harold, Christopher	Caron	14 September, 1903
Hodgson, Robert C.	Battleford	"
Hodge, John	Carievale	16 September, 1903
Huck, Jr., Anton	Qu'Appelle Station	17 October, 1903
Harrison, Frank H. O.	Pense	24 November, 1903
Haney, Sylvester	Lacombe	28 January, 1904
Hayter, Benjamin	Oxbow	13 February, 1904
Ingram, Isaac	Strathcona	9 October, 1899
Imeson, George	Stony Plain	18 December, 1901
Ireton, Henry W.	Moosomin	19 February, 1903
Johnstone, Thomas	Qu'Appelle Station	29 September, 1899
James, William H.	Whitewood	15 November, 1899
Jackson, Charles	Calgary	19 July, 1900
James, Charles W.	Whitewood	11 April, 1901
Jones, Robert	Moose Jaw	8 August, 1901
Johnstone, Edward	Chickney	26 August, 1901
Joyner, Charles A.	Bentley	2 October, 1901
James, Dunham D.	Didsbury	1 November, 1902
Jevne, Ivan	Wetaskiwin	13 February, 1903
Jamerson, Johnston	Ponoka	24 April, 1903
Jones, Frank	Summerberry	22 August, 1903
Johnson, Conrid	Red Deer	29 August, 1903
Jones, Daniel E.	Alameda	16 September, 1903
Krienke, C. F.	Wolseley	29 September, 1899
King, John	Regina	17 October, 1899
Krienke, Albert	Ellisboro.	25 April, 1900
Kerr, William G.	Moosomin	29 September, 1900

SCHEDULE of Holders of Certificates of Qualification under The Steam Boilers Ordinance.—*Continued.*

NAME	ADDRESS	DATE OF ISSUE
<i>Third Class—Continued.</i>		
Krause, Otto	Innisfail	1 October, 1901
Ketcheson Theodore	Moosomin	18 April, 1902
Klippinstein Abraham	Rosthern	23 June, 1902
Klassen, John S.	Hague	26 September, 1902
Klaassen, Jacob C.	Rosthern	1 October, 1902
Kruppa, Jos.	Kaposvar	10 October, 1902
Klein, Oscar A.	Prince Albert	"
Kennedy, Daniel	Sintaluta	22 August, 1903
Kay, Edwin W.	Fairville	14 September, 1903
Koch, Carl	Balgonie	"
Kemp, Thomas D.	"	"
Lang, James	Okotoks	19 July, 1900
Lamoureux, Alcibiade	Lamoureux	15 November, 1900
Lewis, William H.	Innisfail	18 December, 1901
Lee, George	Edmonton	"
Loyal, Lawrence	Onion Lake	12 April, 1902
Louiselle, Jerry	Red Deer	23 April, 1902
Lundy, William T.	Innisfail	"
Leniczek, Adam	Neudorf	30 July, 1902
Lynch, Alexander W.	Blairmore	18 August, 1902
Loewen, Isaac C.	Rosthern	26 September, 1902
Livingstone, John N.	Indian Head	19 February, 1903
Lyseng, Knut K.	Bittern Lake	7 August, 1903
Linnell, Albert W.	Summerberry	22 August, 1903
Morkin, John	Dunbow	1 December, 1899
Martin, Magloire Z.	Morinville	28 May, 1900
Merrill, Henry R.	Carnduff	19 June, 1900
Murray, James A.	Moosomin	29 September, 1900
Merchant, John	Lumsden	30 November, 1900
Mitchell, Timothy W.	Red Deer	7 February, 1901
Montgomery, James D.	Fleming	11 April, 1901
Melton, John W.	Prince Albert	30 May, 1901
Mather, E. M.	Calgary	6 June, 1901
Martin, F. H.	Moose Jaw	8 August, 1901
Macdonald, W. P. C.	Poplar Grove	29 August, 1901
Millham, Oliver C.	Hazelcliffe	"
Mackenzie, John D.	Dalesboro	2 October, 1901
Muth, John	Ebenezer	27 November, 1901
Morden, Jacob R.	Lacombe	18 December, 1901
Moore, John R.	Innisfail	"
Munier, Wilfred	Morinville	"
Miller, Philip	Stony Plain	"
Meneely, William	Edmonton	"
Mikesthus, Michael	Leduc	"
Morkeberg, D	Innisfail	23 April, 1902
Moore, David	Gainsborough	6 May, 1902
Myllymaki, Jacob	New Finland	18 August, 1902
Mayhew, William H.	Broadview	25 August, 1902
Martens, Peter	Hague	26 September, 1902
Meilicke, Karl	Dundurn	30 September, 1902
Miller, William J.	Kirkpatrick	1 October, 1902
Marten, William A.	Broadview	4 October, 1902
Mortimer, Samuel	Strathcona	18 December, 1902
Mallery, William A.	Fleming	19 February, 1903
Moore, Homer S.	Dongola	"
Mitchell, David	Oxbow	13 May, 1903
MacCauley, James	Rabbit Hill	10 June, 1903
Morrison, James A.	Abernethy	22 August, 1903

SCHEDULE of Holders of Certificates of Qualification under The Steam Boilers Ordinance.—*Continued.*

NAME	ADDRESS	DATE OF ISSUE
<i>Third Class—Continued.</i>		
Martin, Henry E.	Regina.....	31 August, 1903
Munroe, John A.	Rouleau	3 September, 1903
Morris, George E.	Regina	17 September, 1903
Meilicke, Emil	Dundurn	24 September, 1903
Meilicke, Otto F.	Dundurn	"
Mik, Frank	Whitewood	30 September, 1903
Mitchell, Edward	Pasqua	24 November, 1903
McKernan, James	Edmonton	9 October, 1899
McKen, James	Yorkton	15 October, 1900
McDonell, Finley	The Sturgeon	23 October, 1900
McLellan, John	Fort Saskatchewan	15 November, 1900
McLeod, Millage J.	Fort Saskatchewan	"
McKellar, John	Fort Saskatchewan	"
McFadyen, Neil	Red Jacket	29 August, 1901
McKinlay, Murdoch	Stony Plain	18 December, 1901
McFayden, John	Wapella	23 January, 1902
McLean, Archibald	Lethbridge	18 August, 1902
McDermid, Malcolm	Indian Head	"
McLellan, John	Fort Qu'Appelle	25 August, 1902
McPhee, John	Lumsden	18 September, 1902
McDonald, Peter	Wapella	6 March, 1903
McKinnon, Donald	Earlswood	"
McLean, Alexander M.	Calgary	9 March, 1903
McLaren, John P.	Percy	30 March, 1903
McFarlane, Lewis	Carievale	24 April, 1903
McGarry, Fred	Lacombe	"
McDonald, William	Penhold	13 May, 1903
McConnell James R.	Red Deer	"
McKen, Jr., John	Yorkton	6 June, 1903
McCartney, Claude	Indian Head	22 August, 1903
McGuire, Lee	Alameda	5 September, 1903
McElroy, Harmond H.	Arcola	16 September, 1903
McCartney, George R.	Moose Jaw	17 October, 1903
McIntyre, John	Calgary	6 November, 1903
Nelson, Frank	Wetaskiwin	30 May, 1900
Nixon, T. H.	Wapella	29 September, 1900
Neufeldt, D. D.	Waldheim	20 November, 1900
Nixon, Kendal	Wapella	24 December, 1900
Nichol, David	Innisfail	18 December, 1901
Noyes, Daniel C.	St. Albert	"
Nilsson, Anders	Ohlin	11 September, 1902
Neufeld, Hermon	Hague	26 September, 1902
Neufeld, D. P.	Rosthern	"
Neufeld, J. M.	Rosthern	"
Nichols, James J.	Edmonton	13 May, 1903
Niven, John	Lethbridge	6 October, 1903
Neufeld, Abram J.	Rosthern	"
Ottewell, Richard P.	Edmonton	9 October, 1899
Olson, Edwin L.	Prince Albert	4 October, 1902
Ovington, John	Moosomin	10 October, 1902
Oliver, Ernest H.	Calgary	6 November, 1903
Prince, Joseph A.	Battleford	11 July, 1899
Peirce, George J.	Red Deer	8 March, 1900
Pateman, George	Welwyn	30 May, 1900
Park, Richard P.	Maple Creek	29 September, 1900
Pearce, James	Edmonton	23 October, 1900

SCHEDULE of Holders of Certificates of Qualification under The Steam Boilers Ordinance.

NAME	ADDRESS	DATE OF ISSUE
<i>Third Class—Continued.</i>		
Peters, Jacob	Osler	20 November, 1900
Perkins, William	Kenlis	24 December, 1900
Pinney, J. D.	Oxbow	24 September, 1901
Prentice, Charles W.	Wolseley	3 October, 1901
Perry, M. Truman	Alameda	15 October, 1901
Putnam, Albert E.	Edmonton	18 December, 1901
Powell, James A.	Edmonton	
Pearce, William	Edmonton	23 April, 1902
Pugh, John	Calgary	"
Pimm, John	Lethbridge	18 August, 1902
Peters, Frank A.	Hague	26 September, 1902
Peterson, William	Yorkton	1 October, 1902
Pachal, Rudolph	Ebenezer	30 March, 1903
Powers, Thomas E.	Strathcona	13 May, 1903
Pullshiy, William	Star	23 June, 1903
Peterson, Alfred T.	Carnduff	5 September, 1903
Penner, Abraham	Rosthern	16 October, 1903
Ramsay, David	Winnipeg	1 August, 1899
Russell, Alexander B.	Regina	29 September, 1899
Robinson, John	Edmonton	9 October, 1899
Ritchie, Charles	Cut Arm	15 November, 1899
Ritchie, James	Saltcoats	24 August, 1900
Rutherford, John	Medicine Hat	29 September, 1900
Ross, Thomas G.	Edmonton	15 November, 1900
Rattray, Archie B.	Edmonton	15 December, 1900
Roberts, William B.	Beaver Hills	7 February, 1901
Reynolds, James J.	Gainsborough	7 May, 1901
Rodgers, William L.	Qu'Appelle Station	18 July, 1901
Rorison, Hugh H.	Moose Jaw	8 August, 1901
Robertson, Alexander	Benbecula	29 August, 1901
Reed, James H.	Yorkton	27 November, 1901
Reeve, Lewis H.	Moosomin	18 April, 1902
Ross, William A.	Milestone	7 August, 1902
Rees, Ilfted	Wolseley	25 August, 1902
Regier, Henry W.	Rosthern	26 September, 1902
Rafie, Andrew	Bon Accord	2 October, 1902
Ryan, James	Wetaskiwin	22 October, 1902
Reynolds, John	Yellow Grass	18 November, 1902
Rose, Wallace	Prince Albert	6 June, 1903
Richards, Henry	Balcarres	22 August, 1903
Reimer, John F.	Osler	30 September, 1903
Reddemann, Herman	Estevan	10 October, 1903
Smith, Gavin G.	Battleford	11 July, 1899
Stadelbauer, Simon	Spruce Grove	18 September, 1899
Smith, N. T.	Moose Jaw	29 September, 1899
Smith, James W.	Moose Jaw	"
Stewart, Thomas H.	Strathcona	9 October, 1899
Sanders, S. B.	Grenfell	1 November, 1899
Smith, William F.	Athabasca Landing	28 November, 1899
Shaw, John Y.	Midnapore	1 December, 1899
Stine, Frank	Hyde	13 February, 1900
Stein, Andrew	Tiree	"
Saunders, Elias T.	Lethbridge	23 March, 1900
Steele, William L.	Oxbow	19 July, 1900
Snider, John B.	Okotoks	"
Steffes, Ferdinand	Morinville	15 November, 1900
Steffes, Joseph	Morinville	"
Stine, Fred	Tiree	12 December, 1900

SCHEDULE of Holders of Certificates of Qualification under The Steam Boilers Ordinance.—*Continued.*

NAME	ADDRESS	DATE OF ISSUE
<i>Third Class—Continued.</i>		
Stephens, Charles	Saltoun.	24 December, 1900
Schlegel, Frank	Duhamel	26 January, 1901
Smith, Alfred A.	Prince Albert	30 May, 1901
Shaw, Ezra	Davin.	29 August, 1901
Spooner, Francis W.	Red Deer Hill	7 September, 1901
Stewart, Archie	Edmonton	"
Stulz, Frank	St. Albert	18 December, 1901
Simpson, Robert N.	Edmonton	"
Sollitt, John H.	Strathcona	"
Siemens, Peter	Anthracite	18 January, 1902
Sickavitch, Jah	Grenfell	15 March, 1902
Smith, Samuel W.	Leduc	23 April, 1902
Size, Francis W.	Whitewood	28 June, 1902
Smith, George H.	Boharm	7 August, 1902
Swartz, Jay	Tregarva	25 August, 1902
Strauss, Abram	Rosthern	11 September, 1902
Shantz, Jeremiah B.	Didsbury	1 November, 1902
Stewart, John A.	Red Deer	24 November, 1902
Still, William	Vegreville	18 December, 1902
Stewart, James A.	Beaver Hills	"
Strom, Theodore	Calgary	9 March, 1903
Shields, William K.	Strathcona	13 May, 1903
Simonson, Henry	Northern	6 June, 1903
Smith, Larnet E.	Ponoka	13 July, 1903
Smith, Henry T.	Kenlis	22 August, 1903
Soderlund, Oscar	Carnduff	16 September, 1903
Strandlund, Eric	Percival	"
Surgeson, Peter	Qu'Appelle Station	23 October, 1903
Storey, John W.	Coalfields	4 November, 1903
Springstein, Cecil B.	Regina	19 December, 1903
Thompson, Charles K.	Wolseley	29 September, 1899
Thompson, Hugh	Moose Jaw	"
Trimble, H. W.	Red Deer	18 December, 1901
Taylor, James A.	Indian Head	17 January, 1902
Thompson, Edmund H.	Grenfell	25 August, 1902
Thurlby, Fred	Indian Head	30 August, 1902
Townsend, Russell C.	Canmore	20 October, 1902
Thomas, C. L. G.	Glen Ewen	13 May, 1903
Thompson, Luke D.	Alameda	14 August, 1903
Ternan, J. Henry	Boharm	22 August, 1903
Turner, Leonard J.	Gleichen	6 November, 1903
Terry, Peter	Okotoks	"
Trippel, Friedrich	Rosthern	13 January, 1904
Utas, Pete	Wetaskiwin	13 February, 1903
Umbach, William	Spruce Grove	13 May, 1903
Vogel, William	Strathcona	9 October, 1899
Van Meter, Charles E.	Millet	18 December, 1901
Vigar, William J.	Whitewood	25 August, 1902
Vanacker, Louis	St. Albert	13 May, 1903
Vidal, James A.	Katepwe	22 August, 1903
Witmer, Abram M.	Strathcona	9 October, 1899
Wilson, J. B.	Carnduff	19 July, 1900
Wilson, James E.	Calgary	"
Welk, D. A.	Rosthern	20 November, 1900
Wiebe, Heinrich P.	Hague	30 May, 1900
Wilson, William J.	Indian Head	26 August, 1901

SCHEDULE of Holders of Certificates of Qualifications under The Steam Boilers Ordinance.—*Continued.*

NAME	ADDRESS	DATE OF ISSUE
<i>Third Class—Continued.</i>		
Ward, William T.	Grenfell	29 August, 1901
Werner, Thomas J.	Carlyle	13 September, 1901
Wulff, Nick	Edmonton	18 December, 1901
Wilson, Richard F.	Carievale	6 May, 1902
Wiebe, Henry K.	Rosthern	23 June, 1902
Walker, Robert	Edmonton	18 August, 1902
Wyatt, William R.	Drinkwater	18 September, 1902
Woods, Thomas	Wapella	10 October, 1902
Walker, Thomas	Coalfields	21 October, 1902
Wilcott, Joseph F.	Manor	24 October, 1902
Wood, John J.	Gainsborough	10 November, 1902
Wickham, William S.	Brookside	6 March, 1903
Woolsey, William	Carnduff	5 June, 1903
Wagman, Wendelin	Qu'Appelle Station	3 July, 1903
Waddingham, John	Indian Head	18 September, 1903
Weder, Frank	Beaver Hills	28 October, 1903
White, William E.	Indian Head	7 December, 1903
Zuehlke, F. C.	Urquhart	18 December, 1901

ACCOUNTANT'S BRANCH.

Staff	1 accountant. 1 assistant accountant. 1 clerk.
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Reference was made in the early pages of this report to the expenditure incurred by this department during the six years from 1898 to 1903 inclusive. The subjoined statement shows in a detailed and comprehensive manner the amount of work handled by the accountant's branch during the year 1903:

Total amount voted for public works	\$372,250 00
Total amount expended	372,220 00
Number of accounts examined, certified and passed to Treasury Department for payment	4,061 00
Amount collected as departmental revenue and paid to credit of general revenue.	14,148 13
Amount of taxes received on account of Large Local Improvement Districts and deposited to district trusts accounts	105,907 96
Number of accounts for work in Large Local Improvement Districts examined and passed for payment ...	1,212 00
Number of cheques issued in payment of accounts in Large Local Improvement Districts	3,088 00
Amount received in payment of overdue taxes in Small Local Improvement Districts and paid through trust account to proper districts.	14,124 42
Number of cheques issued	802 00
Total amount dealt with through books of department during year	\$506,400 51

As has already been stated, the amount expended during the year from the Territorial revenue on account of public works exceeds that of the former year by approximately \$74,000.00 being a greater increase by

a little over \$12,000.00 than the increase of the amount expended in 1902 over that expended in 1901.

The total amount dealt with through the books of the department during the year exceeds that of 1902 by \$79,213.98 while the amount collected as departmental revenue shows a decrease of some \$4,000.00. This is not due to fewer fees being received for certificates under the provisions of ordinances administered by the department, which have really increased, but is accounted for by the fact that certain sums paid in through the department as general revenue were direct grants from the Dominion Government for works undertaken and carried on under the supervision of the department in 1902 on behalf of the Department of the Interior. The amount collected for taxes in large local improvement districts shows an increase of over \$15,000.00 over 1902, while there has been a falling off of over \$5,800 in the amount collected in payment of overdue taxes in small local improvement districts as compared with the same year, which is doubtless due to there being fewer arrearages of taxes to collect and shows the results of the assistance given by the department in endeavouring to clear up arrearages in former years.

Administration and Supervision.

As in previous reports of the department information under this heading has been given to show the cost of administration and the cost of supervision and inspection of public works not done directly by officers of the department. The cost of administration and supervision was 4.32 per cent. in 1902, while in 1903 it had fallen to 3.3 per cent. The cost of superintendence and inspection in 1902 was 2.82 per cent. of the amount expended on works requiring such supervision, while in 1903 it had fallen to 1.2 per cent. The subjoined statement will show the total amount dealt with, cost of staff, percentage of cost of administration, amount expended on works requiring superintendence and inspection and percentage of cost of such inspection.

Total amount dealt with by the department during year as shown by foregoing statement.....	\$506,400 51
Total expenditure for departmental staff.....	16,605 00
Percentage of cost of administration	3 30
Amount expended on bridges, roads, dams, ferries, repairs and reconstruction and other public works requiring superintendence and inspection... ..	249,679 91
Amount expended for superintendence and inspection ..	3,024 62
Percentage of cost for superintendence and inspection ..	1 20

The low percentages of the cost of administration and supervision and for superintendence and inspection have been due to efficient administration of the affairs of the department and are not due to decreases in the salaries paid to the staff and to the rates of pay to inspectors, which, on the contrary, have been increased.

It might be added further, while dealing with matters in connection with the accountant's branch, that material assistance has been rendered school districts in the collection of arrearages of school taxes, the sum of \$8,063.13 of such arrears having been collected through the efforts of the department in 1903 and passed to the several school districts to which they belonged, 486 cheques being issued in this behalf.

Surveys Branch.

Inside staff	{ 1 assistant chief surveyor.
	{ 2 clerks and stenographers.
Outside staff	8 district surveyors and engineers.

The work in this branch has shown a steady increase from year to year and will in all probability keep on increasing for a number of years yet, as new sections of the country are being opened up for settlement. At the present time there are eight public works districts in each of which there is located a district surveyor and engineer. The vacancy in the South Alberta district was filled early in the season by the appointment of A. W. Ponton, D.L.S., to the position, while in the month of October the vacancy in the Centre Assiniboia district was filled by the appointment of Mr. F. J. Robinson, D.L.S., who was formerly district surveyor and engineer for South Alberta, he having recovered sufficiently in health to again take a position with the department. Mr. A. J. Brabazon having resigned from the office in West Assiniboia, Mr. L. C. Charlesworth, D.L.S., who is also a graduate of the School of Practical Science, Toronto, was appointed in his stead. Mr. R. C. Laurie resigned from Centre Alberta district, Mr. A. E. Farncomb, assistant chief surveyor, took his place, while the position of assistant chief surveyor was filled by the appointment of Mr. T. H. Wiggins, D.L.S., who is also a graduate of the School of Practical Science. The department has now a very efficient staff in the gentlemen who fill the eight positions of district surveyors and engineers. Owing to the growing demands for more surveys of roads and road diversions from the regular road allowances in the Dominion lands system of survey in the more thickly settled portion of the Territories in East Assiniboia it will be necessary to divide this district in the coming year and appoint an additional district surveyor and engineer, the work having far outgrown the capacity of one official in the short period during which survey work of this kind can be successfully carried on in the year. The large settlement which is going into western Saskatchewan, along with the construction of new railways in that part of the Territories, will in all probability necessitate the division of Saskatchewan into two districts within the next year or so. The following is a list of the public works districts with the names of the surveyors filling the position of district surveyor and engineer in each of them

North Alberta district.....	A. Driscoll, D.L.S. and C.E., Edmonton.
Centre Alberta district.	A. E. Farncomb, D.L.S. and C.E., Red Deer.
Calgary district	A. C. Talbot, D.L.S. and C.E., Calgary.
South Alberta district.....	A. W. Ponton, D.L.S. and C.E., Macleod.
West Assiniboia.....	L. C. Charlesworth, D.L.S. and C.E., Medicine Hat.
Centre Assiniboia	F. J. Robinson, D.L.S. and C.E., Regina.
East Assiniboia.....	W. T. Thompson, D.L.S. and C.E., South Qu'Appelle.
Saskatchewan district.....	Cyrus Carroll, D.L.S. and C.E., Prince Albert.

The subjoined statement will illustrate in a measure the work of the surveys branch during the year.

Surveys for which requisitions have been made	386
Surveys for which instructions were issued	304
Surveys completed	276
Plans received and recorded	282
Field books received and recorded	25
Preliminary agreements for right of way received	104
Transfers for right of way received	96
Certificates of title for right of way received	130
Amount paid for right of way	\$2,612 00
Average price per acre	\$5 00
Miles of road allowances and surveyed roads for which applications have been received for lease	233
Number of applications	115
Miles leased	175

The number of transfers for title to land is diminished since the Land Titles Offices are empowered to issue certificates of title to the Crown for the lands required for roadway directly from the plan of the survey when it is registered. In the cases of old trails, however, on account of which a great number of cases are unsettled, transfers from the owners are still necessary for registration, and in many instances the property is encumbered, leading to an increased amount of correspondence. Where lands have been homesteaded, and the patents have not yet issued, the Department of the Interior at Ottawa ask that transfers of the lands for surveyed roads be forwarded to that department before a reservation is made, and it is next to impossible to procure these in some cases, especially where the homesteader has moved away without notice to the Dominion Lands Office. Delays also occur where homesteaders have mortgaged their lands on the grants, in which cases registration fees must be paid before certificates of title are issued to the Crown.

The reports of the different district surveyors and engineers are appended, but it will be noted there is no report for Centre Assiniboia, owing to the lateness of the year when the district official was appointed. The small number of surveys made in this district in the earlier part of the year were conducted by an officer working from the department direct.

EDMONTON, *January 1st, 1904.*

B. J. SAUNDERS, Esq.,
Deputy Commissioner of Public Works,
Regina.

SIR,—I have the honour to report as follows on the work done by this office during the past year :

Previous to June of 1903 the work consisted of the preparation of returns of surveys of the preceding year, arranging for the work to be done, and of minor inspections.

June 1st, I took the field with my party and, visiting the different localities in their order, succeeded in getting through with the most pressing matters before the close of the season, which this year was the middle of November. It is to be regretted that work could not have been started early in the spring as a considerable amount more would have been accomplished.

As during the past four years, the question of drainage has taken up most of our time. The season was very similar to those of 1899 to 1902; viz., wet, and the result has been a strong demand for drainage from all localities in this district. At present the department have in

operation here two ditchers which are doing good work: one has just completed Drain No. 1, east of Fort Saskatchewan, and the other is at work on Drain No. 4, immediately north of town. These machines have accomplished work that could not have been done by the usual method of horses and scrapers, and while no doubt the latter method could be used to advantage in places, particularly on small pieces of work, these machines will be found on the whole to be the most satisfactory, and I might say are indispensable.

The four large drains which the department are constructing, viz., Nos. 2, 4, 58 and 110, with a total mileage of some 32 miles, have required a great part of my time in renewing stakes and arranging with owners of land, etc. Examinations have been made of a number of areas to ascertain the feasibility and approximate cost of drainage, but in such cases the final survey is not gone ahead with until the work has been decided on.

The very much increased price of land in this district makes the question of road diversions unpopular, where the same can be avoided, even at a moderately increased cost, and for this reason the number of surveys of this class are very much fewer than in previous years.

Only one "old trail" was surveyed during the past season, viz., Saddle Lake trail, although considerable work has been done on them as a whole in renewing lost corners for the guidance of overseers, and making slight changes necessitated by the late wet years.

New Roads.—Where the physical features of the country will not permit of the road allowance being used, recourse is had to this class of survey, but being of an expensive character, they are not undertaken unless the need is very great. Eleven of these surveys were made the past season.

The office has been kept open during the working season as well as during the season of office-work, in order to attend to matters requiring despatch, and this has been a convenience to overseers, contractors and others having business with the department who require information; and I might say that it has been of service to the department in furnishing these people with proper file numbers, etc., and as a bureau of information furnishing the department and its correspondents with information. The number of reports of inspections made of bridges, roads, drains required, works under construction, would be too voluminous for the purpose of this report.

Taking the surveys referred to above in their order, I beg to attach a list of the same in schedule form.

Your obedient servant,

A. DRISCOLL,

District Surveyor and Engineer.

DRAINS.

Renewing grade and slope stakes on Drain No. 4 in sections 9, 16, 21, 28 and 30 township 53-24-4.

Renewing grade and slope stakes on Drain No. 58 in sections 2, 3, 4, 5, 6 township 53-25-4.

Renewing grade and slope stakes on Drain No. 2 in sections 34, 35, 36 township 55-22-4.

Assessment survey Drain No. 110 in townships 51 and 52-24-4.

Assessment survey Drain No. 81 in township 54-24-4.

Survey of drain and outlet through section 6 township 55-20-4.

Survey of drain and outlet on south boundary township 55-19 and 20-4.

- Survey of drain and outlet through sections 13, 23, 24 township 56-24-4.
- Survey to drain lake on road allowance between sections 15/16 township 53-22-4.
- Survey to drain lake on road allowance between sections 8/17 township 53-21-4.
- Examination survey in township 56-16-4 to lower Witford lake and drain Borwick sloughs.
- Examination survey for overseer of township 51-25-4.

OLD Trails.

- Saddle Lake trail from Witford lake to Saskatchewan river through townships 56 and 57-14/15/16-4.
- Change in location of Calgary and Edmonton trail across Black Mud creek, section 36 township 50-25-4.
- Change in location of Fort Saskatchewan-Victoria trail in section 22 township 55-21-4.
- Survey of Fort Saskatchewan-Victoria trail in section 33 township 55-22-4.
- Survey of Pigeon lake trail in section 23 township 51-25-4.

NEW Roads.

- Survey of new road from Edmonton-Fort Saskatchewan trail to Saskatchewan river between sections 16/21, 15/22 township 53-23-4.
- Survey of new road along blind line south through section 10 township 53-24-4.
- Survey of new road along blind line between sections 13/24, 14/23, 15/22, 16/21 township 50-24-4.
- Survey of new road across section 26 township 47-23-4.
- Survey of new road from Fort Saskatchewan-Victoria trail (north side) to Saskatchewan river on blind line between sections 25/36, 26/35, 27/34, 28/33 township 55-22-4.
- Survey of new road from Lamoureux bridge (on Sturgeon river) north through sections 24, 25 and 26 township 55-24-4.
- Survey of new road along west side of Beaver lake through township 52-18-4.
- Survey of new road through sections 1, 12 and 13 and 24, township 53-19 and sections 7, 18 and 19 in township 53-18-4.

ROAD Diversions.

- Road diversion surveys to avoid several lakes and sloughs on road allowance between sections 21/28, 22/27, 23/26 and 24/25 township 50-24-4.
- Road diversion survey to avoid bends in Clearwater creek on road allowance between sections 11/14 township 50-24-4.
- Road diversion survey around east end of Long lake through section 23 township 47-25-4.
- Road diversion survey to avoid slough on road allowance between sections 6/1 township 47-23.
- Road diversion survey to avoid slough on road allowance between sections 1/2 township 47-21-4.
- Road diversion survey to avoid slough on road allowance between sections 15/16 township 49-19-4.
- Road diversion survey to avoid slough on road allowance between sections 30/31 township 53-22-4.
- Road diversion survey to avoid bend in deep creek on road allowance between sections 33/34 township 55-19-4.

RED DEER, ALTA., *December 31st, 1903.*

B. J. SAUNDERS, Esq.,
Deputy Commissioner of Public Works,
 Regina.

SIR,—I have the honour to submit the following report with regard to the work performed by me during the past season in the Public Works District of Lacombe.

As my appointment as district surveyor and engineer was only passed on July 1st I have not had a full season's work in this district

and it has been confined almost entirely to surveys of road diversions and new roads. As these have already been fully reported on to the department I am not including them in this report.

On July 5th I arrived at Red Deer and proceeded at once to purchase the necessary outfit in the way of transport, camp equipment, etc., and succeeded in placing my party in the field by the 15th of the same month. On looking over the list of work for this district I was convinced that it would be impossible to complete all the work, especially as the season was so far advanced, and in consequence I determined to consult the members of the electoral districts and obtain a list of all of the most urgent surveys which had to be completed before the season closed. With this end in view I visited Innisfail and consulted the member for that district and found that there would be some eight or ten surveys which had to be finished. Before leaving Red Deer I concluded it would be better to complete all possible work in the southern part of the district, working north and ending in the fall in the vicinity of Wetaskiwin. I completed by August 1st all the more urgent work in the Innisfail district and proceeded in advance of my party to Lacombe and consulted the member for that district as to the most urgent work, and found that there would be about twelve or fifteen surveys, but as they were somewhat scattered, being as much as forty miles east and twenty-five miles west of the Calgary and Edmonton railway, I expected that this work would take me until at least September 1st. At about this time it started raining and continued more or less until October 1st. This made the roads almost impassable. I might say here that I found the roads in the vicinity of Lacombe and Ponoka in a worse condition than in any other part of my district, less work having been done on them in the last few years. This is no doubt caused by the rapid growth of population in the outlying districts, and in order to provide passable roads to market centres would require more money than the district as a whole could afford.

On or about September 1st I visited Wetaskiwin and consulted the member of that district as to the surveys required, which I found were more than double those of the other two electoral districts combined.

Early in October I received instructions to proceed to Leduc in the Edmonton public works district, which point I reached about the middle of the month. Considerable time was lost in transporting my outfit from Wetaskiwin to Leduc, as the Calgary and Edmonton trail being the only possible route between these places is not now used to any extent, the result being that it is almost impossible to take a heavy load over it.

I also made two surveys and an inspection in the vicinity of Millet. These surveys and the time lost in transport to Leduc made it necessary to postpone some very important surveys in the vicinity of Wetaskiwin until next season.

On November 3rd I reached Red Deer, my headquarters, and, as there was considerable frost and snow, did not again take the field.

I might suggest in concluding the above report that the members of the electoral districts notify the district surveyor and engineer at once of any minor inspections or work required when making an application for the same to the department. There was one case in my work last season where, if I had been notified of the work by the member when the application was received, as I was within a short distance of the

work I could have completed it in a few hours, but by the time the application had been sent to the department and instructions issued I was some fifty miles away and would then take at least two days to complete.

I made three reports on bridges and one drainage report as shown on the schedule of work completed below.

Your obedient servant,

A. E. FARNCOMB,
District Surveyor and Engineer.

SCHEDULE of Surveys completed in the Lacombe Public Works District.

Inspection and report on bridge across Waskasso creek between secs. 9 and 1 tp. 38 re. 27w4.

Location and report on bridge across big coulee in sec. 5 tp. 38 re. 24w4.

Inspection and report on bridge over Jamieson's coulee in sec. 15 tp. 38 re. 27w4.

Inspection and report on drainage on slough at Ponoka in sec. 5 tp. 43, re. 25w4.

NEW Roads.

Along south bdy. sec. 11 tp. 40 re. 1w5.

Between secs. 1 and 12 tp. 36 re. 1w5.

In secs. 26 and 27 tp. 36 re. 2w5.

West side of Medicine river in secs. 26, 34 and 35 tp. 36 re. 2w5.

East side of Medicine river in sec. 35 tp. 36 re. 2w5.

In secs. 28, 29 and 33 tp. 40 re. 22w4.

In sec. 29 tp. 35 re. 28w4.

In sec. 11 tp. 46 re. 25w4.

In secs. 12 and 13 tp. 46 re. 26w4.

Along the south boundary of sec. 34, 35 and 36 tp. 43 re. 25w4.

Between secs. 29/32, 28/33 and 27/34 tp. 43 re. 25w4.

Change of C. and E. trail in secs. 30, 31 and 32 tp. 42 re. 25w4.

From Penhold east in tp. 36 res. 25 and 26w4.

In sec. 27 tp. 46 re. —w4.

Change of Dried Meat lake trail in tp. 46 res. 23 and 24w4.

In sec. 27 tp. 46 re. 23w4.

West of Leduc in tp. 49 res. 25, 26 and 27w4.

North from Millet change of C. and E. trail in sec. 32 tp. 47 and sec. 5 tp. 48 re. 24w4.

In sec. 29 tp. 45 re. 23w4.

Between secs. 1/12, 2/11 and 3/10 tp. 44 re. 23 and secs. 6/7 tp. 44 re. 22w4.

ROAD Diversions.

In sec. 2 tp. 41 re. 22w4.

In sec. 17 tp. 41 re. 1w5.

In sec. 31 tp. 41 re. 1w5.

In sec. 34 tp. 39 re. 27w4.

In sec. 33 tp. 40 re. 22w4.

In sec. 25 tp. 40 re. 23w4.

In sec. 2 tp. 37 re. 27w4.

In sec. 34 and 35 tp. 40 re. 1w5.

In sec. 5 tp. 41 re. 26w4.

In secs. 8 and 17 tp. 46 re. 24w4.

In sec. 17 tp. 46 re. 24w4.

In secs. 9 and 10 tp. 42 re. 26w4.

In sec. 34 tp. 41 re. 26w4.

In sec. 32 tp. 46 re. 23w4.

In sec. 21 tp. 44 re. 23w4.

In sec. 30 tp. 46 re. 21w4.

In sec. 34 tp. 44 re. 23w4.

In sec. 35 tp. 45 re. 23w4.

In secs. 23 and 24 tp. 46 re. 23w4.

In river lot 28 tp. 46 re. 21w4.

In sec. 25 tp. 46 re. 22w4.

CALGARY, 31st December, 1904.

B. J. SAUNDERS, Esq.,

Deputy Commissioner of Public Works,

Regina.

SIR,—I beg to submit the following report of the work done in the Calgary Public Works District during the year 1903.

Owing to the very bad condition the roads were in during the spring, I did not start field operations until the 1st June, doing a week's

work in the vicinity of Calgary, then going to the Cochrane district, where I was kept busy till the 22nd. On that date I moved my party to Calgary, making, as I went down, an examination of the country south of the Bow river for the purpose of opening a direct road between Cochrane and Calgary.

From the 24th of June to the 28th of July I was at work in the northern part of my district, as far as Olds; amongst other works I surveyed a new road from Beaver dam creek to Nose creek.

From the 29th of July to the 6th of September I worked in the southern part of the district, surveying road diversions, new roads and examinations and surveys for drainage schemes, in the vicinity of Dunbow, DeWinton, Okotoks, High River and Nanton.

From that date to the 25th of September I made some diversions of the Blackfoot trail and a road diversion near Sheppard, and afterwards diversions of the North Morleyville trail with two road diversions west of Cochrane.

On the 26th day of September, according to new instructions received, I began to make a more detailed exploration of the country south of the Bow river, between Cochrane and Calgary, for the purpose of finding the most suitable place for the proposed road to be opened between the two places, but after two days I had to quit work, being nearly crippled with rheumatism. I brought the party back to Calgary, where I discharged the men on the last day of September.

From that date until the middle of Deember, though my health improved gradually, I was unable to undertake any outside work, but I was in the office part of the time, preparing returns with the help of my assistant. Some of the plans have already been forwarded to your department; the balance of the work has been checked and plotted; the plans will be forwarded from time to time as they are completed.

SCHEDULE of surveys made during the season of 1903.

OLD Trails.

Diversions of the Blackfoot trail in the first fifteen miles east of Nose creek.

Diversions of the North Morleyville trail west of Cochrane.

Diversion of the Macleod trail to bridge over Fish creek in secs. 3 and 4 tp. 23 re. 1w5.

NEW Roads.

Road from Beaver Dam creek in sec. 1 tp. 29 re. 3w5 to sec. 21 tp. 25 re. 1w5.

Re-survey of part of new road from Cochrane steel bridge west to Butler's crossing of Jumping Pound creek tps. 25 and 26 res. 4 and 5w5.

Survey of new road from Cochrane steel bridge south to South Morleyville trail, near Stuart's crossing of Jumping Pound creek tps. 24 and 25 re. 4w5.

Road along the centre line of tp. 16 from near the railway station at Nanton east across res. 28, 27 and 26w4 to a point near the Little Bow river.

Road to bridge over Mosquito creek in sec. 15 tp. 16 re. 28w4 included in the above.

Diversion of surveyed road in sec. 6 tp. 19 re. 28w4 opposite saw mill at High River.

Diversion of surveyed road south-west of High River in sec. 33 tp. 18 re. 29w4.

ROAD Diversions.

Re-survey of road diversion in sec. 5 tp. 33 re. 2w5, sec. 31 tp. 32 re. 2w5 and sec. 36 tp. 32 re. 3w5, west of Olds.

Diversion south of De Winton, to Headley's coulee, in secs. 19 and 20 tp. 21 re. 29w4.

- Diversions south of secs. 5 and 2 tp. 19 re. 28w4, east of High River.
 Diversion in secs. 29 and 32 tp. 24 re. 5w5, to give access to sec. 6 tp. 25 re. 2w5.
 Diversion in sec. 17 tp. 26 re. 4w5, being part of Horse Creek trail.
 Diversion in sec. 35 tp. 32 re. 2w5, west of Olds.
 Roadway in south-east quarter of sec. 31 tp. 24 re. 4w5, to give access to homestead of John Murray.
 Re-survey of diversion between secs. 4 and 5 tp. 24 re. 1w5, near Calgary.
 Diversion in sec. 31 tp. 23 re. 28w4.
 Diversion to bridge over Dog Pound creek sec. 34 tp. 30 re. 3w5.
 Diversion in Sec. 3 tp. 28 re. 1w5.
 Diversion in secs. 27 and 34 tp. 27 re. 1w5.
 Diversion in sec. 25 tp. 23 re. 1w5.
 Diversion in sec. 11 tp. 21 re. 29w4.
 Diversion in sec. 35 tp. 24 re. 1w5, around a slough.
 Diversion in sec. 15 tp. 26 re. 4w5.
 Diversions in secs. 22, 23, 27 and 26 tp. 24 re. 4w5, south of Cochrane.
 Diversion in sec. 31 tp. 23 re. 28w4.

DRAINAGE.

- Survey of proposed ditch to drain sloughs between secs. 10 and 15 and 21 and 28 tp. 21 re. 28w4; plan and report.
 Survey of proposed ditch to drain slough in secs. 22 and 27 tp. 21 re. 29w4; plan and report.
 Survey of proposed ditch to drain Suitor's slough in secs. 21 and 22 tp. 21 re. 28w4; plan and report.
 Survey of proposed ditch to drain slough in secs. 9 and 16 tp. 24 re. 29w4; plan and report.
 Survey in secs. 5, 8, 17 and 20 tp. 19 re. 28w4 for the drainage of sloughs on the road allowances in said sections by using drain already built on Mrs. T. W. Robertson's farm; plan and report.
 Inspection and report re-drainage of slough in secs. 21 and 28 tp. 18 re. 29w4; report.

INSPECTIONS.

- Inspection of Blackfoot trail for 16 miles east of Calgary and report about improvements required.
 Inspection of South Morleyville trail in sec. 13 tp. 24 re. 2w5; report and sketch.
 Inspection of boulevard and road allowances in secs. 24 and 25 tp. 24 re. 2w5, fenced in by Alfred McKey. Reported to Short & Stuart, barristers, representing the Attorney General.
 Inspection of surveyed road and diversion in sec. 11 tp. 24 re. 2w5.
 Inspection of proposed diversion of Macleod trail in sec. 34 tp. 23 re. 1w5; report.
 Inspection of the country south of the Bow river for the purpose of opening a road between Calgary and Cochrane. First report sent on 4th July, further examination partly made.
 Inspection in tp. 25 re. 29w4 re proposed road to be surveyed; partly made.
 Inspections in secs. 22, 27 and 34 tp. 32 re. 2w5 re opening road to Olds; petition and sketch sent in.
 Inspection of Macleod trail in sec. 10 tp. 23 re. 1w5; report about improvements required.
 Inspection of proposed road diversion in sec. 20 tp. 20 re. 29w4; report and sketch sent in.

BRIDGES.

- Inspection of bridge over ditch draining Midnapore slough, across Macleod trail, sec. 14 tp. 22 re. 1w5; plan and report.

OUTSTANDING Surveys.

- The following are the only surveys for which I have instructions and which are not made:
 Road to give outlet to sec. 36 tp. 23 re. 29w4.
 Examine, and, if necessary, survey a ditch to drain slough on road allowance two miles straight north of Sheppard.
 Inspection of road allowance north of secs. 21 and 22 tp. 24 re. 3w5,

During the four months of field operation 917 miles of regular surveys were performed, necessitating the re-survey of 15.4 miles of old lines, to establish corners and connect new surveys; about 17 miles of track survey were also made while exploring for the location of proposed roads and drains.

Your obedient servant,
ALBERT CHAS. TALBOT,
District Surveyor and Engineer.

MACLEOD, *December 31st, 1903.*

B. J. SAUNDERS, Esq.,
Deputy Commissioner of Public Works,
Regina.

SIR,—I beg to submit the following report on the surveys performed by me in the Macleod district during the season of 1903 :

My appointment as district surveyor and engineer for the Macleod district dated from 1st May. I reported at Regina on the 6th where I spent several days to familiarise myself with the system of work followed by the department. The balance of the month was occupied in arranging for suitable office and residential quarters in Macleod and outfitting preparatory to taking the field.

My party got under canvas on 2nd June. From Macleod I proceeded to Lethbridge district where the actual season's work commenced. From Lethbridge I worked south and west by way of Magrath, Cardston, Kimball, Beazer, Mountain View, Fishburn and Pincher Creek, taking up the surveys in rotation. The season's work consisted chiefly in surveying road diversions, locating new roads, making examinations of surveyed roads, locating bridge sites, and surveying several small government drains. I was able during the season to give attention to all the most pressing matters pending, but you are aware that there is a large arrearage of work all through the district and it will occupy the best part of another season to get fairly ahead of it.

SCHEDULE of Surveys performed during the season of 1903.

- New road across Six Mile coulee in sec. 15-8-21w4 tp. 8 re. 21w4.
- New road across Pothole creek in sec. 36 tp. 5 re. 22w4.
- Road diversion to avoid Pothole creek on sec. 16 tp. 5 re. 22w4.
- Road diversions on secs. 2 and 11 tp. 5 re. 22w4 to avoid impassable cut banks of Pothole creek on road allowance between secs. 2 and 3.
- Change in location of surveyed road leading to St. Mary river bridge on sec. 23 tp. 3 re. 25w4.
- New road to avoid Shaw's lake through secs. 28 and 29 tp. 3 re. 24w4.
- Road diversion to avoid a small lake on road allowance between secs. 17 and 18 tp. 3 re. 24w4.
- Changes in location of surveyed road Cardston to Boundary creek tp. 2 re. 25w4.
- Road from Aetna SE $\frac{1}{4}$ sec. 23 tp. 2 re. 25w4 to St. Mary river bridge SW $\frac{1}{4}$ sec. 1 tp. 2 re. 25w4.
- Road from St. Mary river bridge SW $\frac{1}{4}$ sec. 1 tp. 2 re. 25w4 to Kimball SW $\frac{1}{4}$ sec. 31 tp. 1 re. 24w4.
- Road from Kimball SW $\frac{1}{4}$ sec. 31 tp. 1 re. 24w4 to Taylorville sec. 15 tp. 1 re. 24w4.
- Road diversion in SE $\frac{1}{4}$ sec. 4 tp. 2 re. 24w4 to give access between Colles and Taylorville.
- Road diversion on NW $\frac{1}{4}$ sec. 33 tp. 1 re. 24w4 to give access between Colles and Kimball,

- New road from Aetna SE $\frac{1}{4}$ sec. 23 tp. 2 re. 25w4 to timber sec. 10 tp. 1 re. 27w4.
- New road through NW and NE quarters of sec. 31 tp. 1 re. 24w4 giving access between Colles and Kimball.
- Road diversion on SW and NW quarters of sec. 24 tp. 2 re. 27w4 giving access between Beazer and Leavitt.
- New road through secs. 13 and 24 tp. 2 re. 27w4 giving access between Beazer and Leavitt.
- Road diversion in secs. 17 and 20 tp. 2 re. 27w4 to avoid lake between secs. 19 and 20.
- Road diversion in sec. 24 tp. 2 re. 28w4 to avoid a lake on road allowance between secs. 24 and 25.
- Road diversion in sec. 31 tp. 2 re. 27w4, sec. 36 tp. 2 re. 28w4 and sec. 6 tp. 3 re. 27w4 giving access between Caldwell and Leavitt.
- Road diversion in SW $\frac{1}{4}$ sec. 24 tp. 2 re. 28w4 giving access between Mountain View and Caldwell.
- New road between E and W halves of sec. 26 tp. 2 re. 28w4 giving access to Caldwell from the south.
- Road diversion to avoid lake between secs. 19 and 20 tp. 2 re. 27w4 giving access to Mountain View from Leavitt.
- Road giving access to cemetery on NW $\frac{1}{4}$ sec. 18 tp. 2 re. 27w4 from Mountain View.
- New road from NW corner of sec. 15 to ford on Belly river in NW $\frac{1}{4}$ sec. 17 tp. 2 re. 28w4.
- Road diversion to avoid a lake between sec. 19 tp. 2 re. 27w4 and sec. 24 tp. 2 re. 28w4.
- Road diversion in NE $\frac{1}{4}$ sec. 31 tp. 5 re. 29w4 to avoid a lake on road allowance between secs. 31 and 32.
- Road diversion on road allowance secs. 16 and 17 tp. 5 re. 28w4.
- Road diversion in NW $\frac{1}{4}$ sec. 9 tp. 5 re. 28w4 to avoid lake on road allowance between secs. 9 and 16.
- Survey of road leading to bridge site on Dry Wood river NE corner of sec. 12 tp. 4 re. 28w4.
- Survey of road from Pincher Creek to Oil Fields between sec. 1 tp. 5 re. 30w4 to sec. 29 tp. 2 re. 29w4.
- Examination and report on surveyed road in secs. 34 and 27 tp. 8 re. 26w4.
- Examination of Macleod-Fishburn road where it crosses sec. 7 tp. 6 re. 26w4.
- Examination and report on surveyed road in the SE $\frac{1}{4}$ sec. 23 tp. 2 re. 28w4.
- Examination and report on road from Frank to Blairmore.
- Examination and report on road diversion in NE $\frac{1}{4}$ sec. 16 tp. 5 re. 28w3.
- Examination and report on road diversion in secs. 19 and 24 tp. 5 re. 29w3.
- Examination and report on bridge across irrigation canal in sec. 36 tp. 5 re. 22w5.
- Location of government drain in sec. 36 tp. 5 re. 22w4.
- Location of government drain in sec. 16 tp. 8 re. 26w4.
- Report and survey of proposed drain to improve surveyed road in sec. 21 tp. 2 re. 27w4.
- Location of bridge site in Six Mile coulee in sec. 15 tp. 8 re. 21w4.
- Location of bridge site on Drywood river in sec. 12 tp. 4 re. 28w4.
- Location of bridge site on Drywood river in sec. 17 tp. 4 re. 29w4.
- Location of bridge site on Yarrow creek in sec. 8 tp. 4 re. 29w4.
- Location of bridge site on Pine creek in sec. 21 tp. 3 re. 29w4.

Plans and reports in connection with several surveys were prepared while in the field and have been already submitted. Since my return to headquarters at Macleod I have been steadily engaged in preparing my returns for the season and I have every expectation of being able to place them in your hands at an early date.

Every effort was made on my part during the past season to obtain the consent of owners of land entered upon, and the general approval of all parties interested in the location of roads, and although this entailed the loss of much time, and increased the initial cost of surveys, a saving I hope will be effected when the question of compensation to owners and transfers of titles comes up.

Your obedient servant,

A. W. PONTON,

District Surveyor and Engineer.

MEDICINE HAT, *December 31st, 1903.*

B. J. SAUNDERS, Esq.,
Deputy Commissioner of Public Works,
 Regina.

SIR,—I have the honour to submit the following report of the work done in the Public Works District of West Assiniboia during the season of 1903.

I was appointed district surveyor and engineer for this district in the month of May of this year and, after some time spent at the department in Regina in obtaining necessary information, I left for Medicine Hat where I organised my party and took the field early in the month of June.

The greater part of the work during the season was done on the survey of old trails throughout the district and in addition to these there were changes made in some surveyed trails, one road diversion surveyed, four new roads; cross sections of creeks taken for bridges; fireguards staked out for ploughing; reports made on numerous road allowances applications for the lease of which had been received; and work on road improvements supervised. Field work was completed in October.

SCHEDULE of surveys and inspections.

- Diversion in sec. 27 tp. 13 re. 6w4.
- Road in secs. 1 and 12 tp. 8 re. 4w4.
- Road up Porter's hill east of Medicine Hat in sec. 28 tp. 12 re. 5w4.
- Change in surveyed trail from Maple Creek to Graburn from sec. 29 tp. 9 re. 29w3 to sec. 9 tp. 10 re. 28w3.
- Change in surveyed trail from Maple Creek to the Gap from sec. 16 tp. 9 re. 26w3 to sec. 27 tp. 8 re. 26w3.
- Old trail south of Swift Current from sec. 30 tp. 15 re. 13w3 to sec. 5 tp. 14 re. 14w3.
- Road east from Swift Current across Swift Current creek in sec. 30 tp. 15 re. 13w3.
- Old trail north-east from Swift Current from sec. 25 tp. 15 re. 14w3 to sec. 13 tp. 18 re. 13w3.
- Road along south bank of the Saskatchewan river from the mouth of Swift Current creek in sec. 4 tp. 20 re. 13w3 to sec. 1 tp. 20 re. 16w3.
- Old saw mill trail from Irvine in sec. 31 tp. 11 re. 2w4 to sec. 17 tp. 9 re. 2w4.
- Road from Medicine Hat past the Culley coal mine in secs. 36, 35 and 26 tp. 12 re. 6w4.
- Road from Medicine Hat to the public cemetery in secs. 31 tp. 12 re. 5w4 and sec. 25 tp. 12 re. 6w4.

THE following fireguards were staked out.

- Along the road allowance between res. 2 and 3w4 from the northern limit of the C.P.R. right of way to the road allowance between tps. 13 and 14.
- Along the road allowance between tps. 13 and 14 from the Saskatchewan river to Many Island lake.

CROSS SECTIONS for bridges were taken at

- Creek in sec. 1 tp. 8 re. 4w4.
- Creek in sec. 12 tp. 8 re. 4w4.
- Swift Current creek in sec. 30 tp. 15 re. 13w3.

Applications having been made by the Canadian Land and Ranche Company to lease the road allowances within the limits of their lands, inspection was made of these roads and the trails in the vicinity as given below:

- At Crane Lake—All tp. 12 re. 23w3.
- Secs. 6, 7, 18, 19, 30, 31 in tp. 12 re. 22w3,

At Swift Current—Secs. 1, 2, 3, 10, 11, 12, 13, 14, 15, 22, 23 and 24 in tp. 15 re. 14w3.

Secs. 6, 7, 17, 18, 19, 20 tp. 15 re. 13w3.

Secs. 28 and 33 in tp. 14 re. 14w3.

At Gull Lake—Secs. 1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 23, 24 and 25 in tp. 13 re. 19w3.

Secs. 25, 33, 34, 35 and 36 in tp. 12 re. 19w3.

A considerable amount of work was done by the government in improving the road up Porter's hill east of Medicine Hat, and some time was spent in finding the best location for a road up this hill which has always caused trouble in the past. A good grade was obtained and a first class road has now been made there.

Your obedient servant,

L. C. CHARLESWORTH,

District Surveyor and Engineer.

SOUTH QU'APPELLE, *December 31st, 1903.*

B. J. SAUNDERS, Esq.,

Deputy Commissioner of Public Works,

Regina.

SIR,—I beg to submit the following report on the work performed by me during the past year in the Public Works District of Eastern Assiniboia.

From January 1st to May 11th I was occupied in completing returns of surveys made by me in the previous year and on the latter date commenced work in the field on the survey of road leading from Arnold's point in the Qu'Appelle valley southward across Pasqua's reserve towards Qu'Appelle for which instructions had been issued last year.

My time this season has been taken up to a considerable extent in the survey of roads across Indian reserves which it was important to have established and in addition to road above mention across Pasqua's reserve, I have surveyed three roads across the Indian reserve north of Broadview and Whitewood leading from Qu'Appelle river to these points.

In the northern part of my district I have surveyed a road leading between Saltcoats and Yorkton, following along the M.N.W. railway line for a considerable part of the distance. This also gives access to Rokeby station which is intermediate between these points.

SCHEDULES of Surveys made this season.

NEW Roads.

Road leading across Qu'Appelle valley in secs. 16 and 9 tp. 18 re. 32w1 to give access to Tantallon station from north and south.

Road leading across Indian reserve from east end of Crooked lake to Broadview tps. 16, 17, 18 re. 5w2.

Road leading from Cotham to Broadview across Indian reserve tps. 16, 17 and 18 res. 4 and 5.

Road leading from east end of Round lake to Whitewood across Indian reserve tps. 17 and 18 re. 3w2.

Road across Qu'Appelle valley and Pasqua's reserve *via* Arnold's Point leading to Qu'Appelle tps. 19, 20 re. 14 and 15w2.

Road leading from Saltcoats to Yorkton tps. 24 and 25 re. 3 and 4w2 adjacent to M.N.W. railway line.

Road in sec. 29 tp. 18 re. 14w2 following general course of travelled trail from Edgeley to Qu'Appelle.

ROAD Diversions.

Diversion in secs. 25 and 26, 35 and 36 tp. 19 re. 15w2 to avoid slough on road allowance.

Diversion in sec. 2 tp. 18 re. 8w2 to avoid slough on road allowance.

Diversion in sec. 26 tp. 18 re. 8w2 to avoid slough on road allowance.

Diversion in secs. 31 and 36 tp. 17 res. 7 and 8w2 to avoid slough on road allowance.

Diversions in secs. 1 and 6 tp. 17 re. 8 and 7w2 to avoid slough on road allowance.

Diversion in secs. 6 and 7 tp. 19 re. 10w2 to obtain suitable crossing of ravine on road leading to school.

Diversion in sec. 16 tp. 20 re. 10w2 to avoid crossing a ravine.

Diversion in secs. 25 and 26 tp. 15 re. 5w2 to avoid hay meadow on road allowance.

Diversion in sec. 12 tp. 15 re. 5w2 on road leading from south to Broadview.

Diversion in SW $\frac{1}{4}$ sec. 36 tp. 16 re. 5w2 on road leading to Broadview from the south.

Diversion in NE $\frac{1}{4}$ sec. 5 tp. 15 re. 4w2 to avoid muskeg on road allowance.

Diversions in secs. 9 and 10, 15 and 16 tp. 14 re. 3w2 to avoid creek in road allowance.

Diversions in secs. 7 and 18 tp. 14 re. 2w2 across valley of Pipestone creek on road leading to Whitewood.

Diversion in secs. 33 and 34 tp. 14 re. 2w2 to avoid pond on road allowance.

Diversion in N $\frac{1}{2}$ sec. 12 tp. 16 re. 3w2 adjoining C.P.R.

Diversion in sec. 35 tp. 16 re. 2w2 to avoid ponds on road allowance.

Diversion in secs. 24 and 25 tp. 17 re. 2w2 to avoid ponds and sloughs on road allowance.

Diversion in sec. 11 tp. 17 re. 1w2 to avoid pond on road allowance.

Diversion on NE $\frac{1}{4}$ sec. 8 tp. 15 re. 33w1 adjoining C.P.R.

Diversion in secs. 23 and 24 tp. 13 re. 33w1 to avoid ponds and sloughs.

Diversions in secs. 25, 26 and 36 tp. 13 re. 33w1 to obtain suitable crossing of valley of Pipestone creek.

Diversions in secs. 13, 23 and 24 tp. 14 re. 33w1 to obtain suitable crossing of ravine.

Diversion in secs. 2 and 3 tp. 14 re. 32w1 to avoid sloughs on road leading west from Moosomin.

Diversion in sec. 25 tp. 13 re. 34w1 *via* new bridge at Dring's crossing of Pipestone creek.

Diversion in sec. 2 tp. 14 re. 33w1 across ravine on road leading north to Red Jacket.

Diversion in secs. 7, 8 and 17 tp. 22 re. 32w1 on road leading to Churchbridge.

Diversion in secs. 23 and 24 tp. 29 re. 32w1 on road leading to Kamsak bridge over Assiniboine river.

Diversion in secs. 31 and 36 tp. 20 re. 32 and 33w1 across valley of Big Cut Arm creek on road leading to Churchbridge.

Diversion in sec. 20 tp. 20 re. 32w1 across valley of Beaver creek on road leading to Welwyn.

Diversion in sec. 26 tp. 25 re. 4w2 to avoid crossing Little White Sand river.

Diversion in sec. 36 tp. 25 re. 4w2 to avoid second crossing of Little White Sand river.

Diversion in NE $\frac{1}{4}$ sec. 28 tp. 27 re. 4w2 to avoid crossing Little White Sand river.

Diversion in sec. 17 and 21 tp. 28 re. 4w2 being a road leading north from Ebenezer to bridge site in sec. 21 and to ford in sec. 17.

Diversion in sec. 29 tp. 24 re. 4w2 to avoid muskeg on road allowance leading from Otthon to Yorkton.

Diversion in secs. 19 and 30 tp. 23 re. 1w2 adjoining the M.N.W. railway line on road leading to Saltcoats.

Diversion in sec. 11 tp. 25 re. 3w2 to avoid a marsh on road leading to Rokeby.

Diversion in NE $\frac{1}{4}$ sec. 12 tp. 24 re. 2w2 to avoid pond on road leading to Saltcoats.

Diversion in SW $\frac{1}{4}$ sec. 18 tp. 24 re. 2w2 to avoid marsh on road leading to Saltcoats.

Diversion in sec. 20 tp. 25 re. 2w2 to obtain a suitable crossing of marsh and avoid lake on road allowance to west.

Diversion in sec. 16 tp. 25 re. 3w2 to avoid marsh on road allowance between Rokeby and Yorkton.

Diversion in NE $\frac{1}{4}$ sec. 11 tp. 27 re. 4w2, to avoid crossing the Little White Sand river on road leading to Yorkton.

DRAINAGE.

The following proposed drains have been examined and reported on, viz.:

- (1) In sec. 33 tp. 14 re. 2w2; (2) in sec. 21 tp. 17 re. 1w2.

The following drains have been staked out for construction, viz.:

- (1) In Section 27 township 26 re. 4w2, to drain sloughs on road allowance.
 (2) On road allowance between sec. 11 and 12 tp. 27 re. 4w2, to drain large hay meadow extending across road allowance into Little White Sand river.
 (3) In secs. 1, 2 and 12 tp. 25 re. 4w2, to lower level of Pebble lake and conduct water to Little White Sand river.

Right of way surveys have been made for items (2) and (3), also for a drain in sec. 6 tp. 26 re. 3w2, which had already been constructed for the purpose of draining Snell's slough near Yorkton into the Little White Sand river.

CROSS SECTIONS for bridges.

Across channel of Whitesand river in sec. 21 tp. 28 re. 4w2.

Across channel of Little White Sand river between secs. 25 and 36 tp. 26 re. 4w2.

Across channel of Weed creek in Indian reserve near R.C. Mission at east end of Crooked lake in the Qu'Appelle valley.

Across channel of Beaver creek, sec. 3 tp. 16 re. 30w1.

PROPOSED roads examined and reported on.

Between Summerberry and Grenfell, tp. 17 res. 7 and 8w2.

Along Big Cut Arm creek, sec. 15 tp. 22 re. 1w2.

From bridge over Weed lake, southward in tps. 15 and 16 re. 5w2.

Examination of road allowance between secs. 25 and 26, and 35 and 36 tps. 19 re. 15w2.

In conclusion I may say that the opening up of new tracts of country in this district by the extension of railway lines and the fencing of the older settled portions, thereby obstructing trails which in previous years were available for public travel, necessitates making a very large number of diversions from the original road allowances to avoid ponds, sloughs and ravines, and so many requests for work of this kind have been made that a large number for which instructions were issued could not be undertaken this year.

Last year, owing to amount of work to be done, I could not visit Saltcoats and Yorkton districts, while this season I was unable to make any surveys in Cannington and Souris districts, and I am of opinion that it will be advisable to reduce the area of my district.

Your obedient servant,

WM. THOMPSON,

District Surveyor and Engineer.

PRINCE ALBERT, 31st December, 1903.

B. J. SAUNDERS, Esq.,
Deputy Commissioner of Public Works,
 Regina.

SIR,—This year I have performed surveys, taken levels, retraced lines of old surveys, made investigations and reports in 51 cases, which include several left over from last year.

Most but not all of the foregoing cases were assigned to me to perform, but while engaged in such duties other urgent cases cropped up. These I attended to while on the spot, which saved travel and expense.

for next year, besides being required for immediate use. This leaves only five cases left over for next year. Of these a survey near Brancepeth and another near Melfort, distant 35 and 70 miles respectively, the applications came in some time after I had performed all the work I knew of in that direction and returned. In short, they came too late. The three other cases left over are referred to later on. It will be observed that I have less of trails to survey than formerly, but more of new roads and road diversions. These are generally short ways about to connect roads and to avoid sloughs. It will be noticed also that I have very many more cases of laying out drains, and investigating as to the drainage of certain places to ascertain whether it would be advisable or feasible or not. If the drainage cannot be effected the fact is reported and the matter is ended. In all such cases preliminary levels have to be taken. In doubtful cases a pencil sketch and profile have to be made, also an estimate of quantities. Where the scheme is feasible the same has to be done with the addition of actual staking out of the drain, marking the stakes, making a tracing, profile, a sketch of the locality, a specification and an estimate. A traverse line has to be surveyed on the ground, tied to some section corner. From such traverse the sketch is made. In the staking out a second set of levels has to be taken, one for each stake. This is a necessary check on the first or preliminary levels.

Actual settlers are beginning to drain their lands. Their statute labour is beginning to tell on the roads.

When travelling along I found the overseers in some cases were in need of levels to guide them in their work. In such cases I took levels, staked out the ditches and gave advice in aid of their commendable efforts. These cases are included in the schedules.

The bridges, culverts and grading entrusted to the overseers of local improvement districts, and others have, so far as I know, and I have seen a good deal of such, been well done.

I have not heard of complaints from any source. No accidents and no casualties of any kind have been reported to me. The several ferries on both north and south branches of the Saskatchewan have I think been more satisfactorily managed than formerly.

At the beginning of the year, and up to April, I managed to finish all the plans, notes and field work of 1902.

On the 14th April I performed my first survey of the season at Saskatoon. As soon thereafter as there was grass for the horses I set out on almost continuous surveys and investigations till the first snow and heavy frosts came.

The whole season was unusually cold and wet. I so managed, however, as to scarcely lose any time by reason of the rains.

Several of my plans of surveys of roads, and of my reports on investigations being needed for immediate use were made and sent in as required.

I am now making the plans in duplicate, reports, copies of field notes, diagrams, etc., of all my survey and other work, not already sent in. These will all be attended to in the time required between now and spring.

SURVEY of Old Trails.

Trail, sec. 2 tp. 40 re. 9 and sec. 36 tp. 39 re. 9 and secs 29/30 tp. 39 re. 8 all west 3m., being road leading from Doukhobor village to Lavell's ferry, near Henrietta station.

Trail, sec. 28 tp. 46a re. 25w2, road to Adam's ferry.

Trail, Saskatoon towards Battleford, 25 miles. This was a retracing of old survey.

Road, river lots 59 and 60 Prince Albert belt. This was a retracing survey with levels, etc.

SURVEY of New Roads.

New road, secs. 6 and 7 tp. 46 re. 3w3 to Wingard ferry.

New road, sec. 12 tp. 46 re. 4w3 from said ferry west.

New road, sec. 31 tp. 34 re. 5w3 and sec. 6 tp. 35 re. 5w3 on trail Nutana to White Cap reserve.

New road, sec. 29 tp. 36 re. 5w3 Saskatoon to ferry.

New road, sec. 20 tp. 36 re. 5w3 Nutana to cemetery.

New road, sec. 5 tp. 46 re. 26w2 to Dubray's $3\frac{1}{2}$ miles north to avoid low lands and river.

New road, sec. 24 tp. 46a re. 25w2 to connect the Kinistino road with Adam's ferry.

New road, sec. 26 tp. 42 re. 5w3 to connect the town of Rosthern with roads to the south.

New road, sec. 19 tp. 43 re. 1w3, a winter road to avoid Batoche hill.

New road, sec. 11 tp. 46 re. 5w3 to extend the road from Wingard ferry westerly.

SURVEY of road diversions.

Road diversion, sec. 24 tp. 48 re. 25w2, to avoid a slough on road to Markley's ferry.

Road diversion, sec. 17 tp. 48 re. 24w2, east of above.

Road diversion, river lot 60, Prince Albert settlement, to connect road allowances.

Road diversion, sec. 8 tp. 48 re. 26w2, to avoid Lizard lake.

Road diversion, secs. 3 and 4 tp. 45 re. 18w2, to avoid Melfort creek.

Road diversion, sec. 34 tp. 44 re. 18w2, to avoid several crossings of Melfort creek.

Road diversion, sec. 20 tp. 44 re. 20w2, to avoid slough.

Road diversion, sec. 20 tp. 45 re. 21w2, to avoid slough.

Road diversion, sec. 18 tp. 45 re. 21w2, to avoid slough.

Road diversion, sec. 15 tp. 46 re. 27w2, to avoid slough.

Road diversion, sec. 21 tp. 47 re. 26w2, to avoid slough.

Road diversion, sec. 15 tp. 49 re. 4w3 and sec. 16 tp. 49 re. 4w3 to avoid slough.

Road diversion, sec. 15 tp. 43 re. 5w3, to avoid slough.

Road diversion, sec. 14 tp. 43 re. 5w3, to avoid slough.

Road diversion, sec. 18 tp. 45 re. 21w2 and on sec. 13 tp. 45 re. 22w2, to avoid waters of Waterhen lake.

DRAINAGE Surveys.

Government drain No. 118, levels, survey plan, profile, specification, lay out sec. 16 tp. 44 re. 18w2.

Levels, profile, survey, lay out and estimate for drain sec. 24 tp. 48 re. 25w2 to take water from road.

Levels, profile, sketch, lay out and estimate for drain sec. 31 tp. 48 re. 24w2 to take water from road.

Levels, profile, sketch, lay out and estimate for drain sec. 33 tp. 48 re. 24w2 to take water from road.

Levels, sketch, profile and estimate for ditch sec. 36 tp. 44 re. 21w2 to remove water from path to school.

Levels, sketch, profile, estimate for ditch sec. 20 tp. 45 re. 21w2 as an alternative for road diversion.

Levels and sketch for clearing out of a creek on sec. 17 tp. 45 re. 21w2 as an aid to the above.

Levels and profiles for ditches on roads secs. 9/16 tp. 45 re. 21w2.

Levels and profiles and lay out of ditches secs. 23/24, 13/14 tp. 47 re. 26w2 along road to aid overseer of same.

Levels, profiles, lay out and report on two ditches sec. 27 tp. 49 re. 4w3 in lieu of road diversion.

Levels and investigations as to possibility of draining road allowance sec. 18 tp. 48 re. 24w2 (not feasible).

Levels and investigations as to drainage of sec. 17 tp. 48 re. 24w2 (not being feasible a diversion surveyed).

Levels and investigation as to drainage of slough on sec. 13 tp. 48 re. 25w2 (not feasible).

Levels with survey sketch and profiles and investigation as to drainage sec. 23 tp. 48 re. 24w2.

Report on survey of last year secs. 27/34 tp. 36 re. 6w3 and secs. 3/4 tp. 37 re. 6w3 to remove water from roads near Smithville.

INSPECTIONS made.

Inspection of trail Saskatoon to White Cap Indian reserve as to need of survey, 15 miles (not needed).

Inspection of trail Saskatoon to Batoche and beyond, say 60 miles, as to need of survey of trail (reported).

Inspection of road as to advisability of survey of a diversion secs. 29/30 tp. 47 re. 26w2.

Inspection as to approach to St. Louis ferry (McKenzie's crossing), sec. 13 tp. 45 re. 27w2.

Inspection of road between tps. 44 and 45 re. 18w2, 6 miles, with detailed report and estimate of repairs needed.

INVESTIGATION—Bridges.

Bridge, sec. 2 tp. 40 re. 9w3 at Doukhobour village.

Bridge, sec. 28 tp. 47 re. 26w2, near Prince Albert.

Culvert, river lot 37, Prince Albert settlement; levels, plan and estimate. Culvert is now built.

Bridge, sec. 24 tp. 48 re. 1w3, Minor's creek, Lily Plains road; repairs to embankment.

All of which is respectfully submitted.

CYRUS CARROLL, D.L.S.,
District Surveyor and Engineer.

Geographic Board.

Mr. J. S. Dennis, late Deputy Commissioner of Public Works, having resigned as Territorial representative on the Geographic Board of Canada, a recommendation was transmitted to the Secretary of State, Ottawa, that the present Deputy Commissioner of Public Works be appointed to the vacancy but as the appointment was made late in the year no consultations were held with the Board in reference to names.

The demand for copies of the Territorial map is still keeping up and it will be advisable to have a third edition published within a year or two, so as to bring all the information obtained from recent Dominion land surveys and from other sources up to date on a well prepared map.

ENGINEERING BRANCH.

Staff.....	{	Assistant chief engineer.
		1 draughtsman.
		1 clerk in charge of bridge records.
		1 clerk and stenographer in charge of road improvement and well boring records.
		1 clerk and stenographer in charge of fireguards records.
		1 stenographer.

During the past year although the same number of bridges has not been dealt with as in 1902 the works undertaken have been in many instances of a more permanent character. One hundred and twenty-seven new bridges were constructed, twenty-eight were rebuilt and

fifty-two were repaired, being two hundred and seven bridges dealt with by the department, against two hundred and eighty during 1902 and one hundred and thirteen in 1901. The large number in 1902 was due to the excessive floods in May and June of that year, by which a number of small structures in addition to four or five of the larger bridges were more or less damaged or completely destroyed.

The office work of the branch during the year shows that 45 plans were prepared, indexed and recorded, 55 contracts were prepared and recorded, 154 bills of quantities for material were prepared and recorded.

It will be observed that the number of plans prepared is less than in 1902, owing to the fact that in 1902 a series of general standard bridge plans had been prepared, thus avoiding the necessity of making special plans for every small structure. During the year the method was adopted of keeping close track of the expenditure incurred in bridge construction and repairs, and an extra clerk was engaged and kept at work in checking up and entering all paylists and accounts in connection with every structure in an office record book kept in the engineering branch. This will enable the department to readily compare the cost of similar structures, and will be useful for future reference in preparing estimates for new bridges. Although it may be found that in some localities the amount of work done was not up to expectations, it must be borne in mind that the estimates were not passed until the second sitting of the first session of the Legislative Assembly in June, resulting in instructions for the various class of works under the supervision of the department not being issued at as early a date as was desired. Some difficulty was also experienced in the transportation of material, owing to the congested state of traffic on the railway lines.

DEPARTMENTAL BUILDINGS.

The crowded condition of the departmental buildings formerly occupied by the several departments of the Government have been referred to in former reports, and it may be also pointed out that with the exception of the quarters occupied by the Departments of Education and Agriculture they were difficult of access, being nearly a mile and a half from the business portion of the Territorial capital, were unsanitary, badly heated and badly lighted and totally undesirable for the purpose for which they were used.

Mr. G. Michaelis having decided to rebuild in part, and enlarge the building occupied by the Regina Trading Co., Ltd., arrangements were made with him by which all the departments could be housed under one roof. The Departments of Education and Agriculture moved into the new quarters in November and the following month the Departments of the Attorney General, of the Territorial Secretary, of the Territorial Treasurer and of the Territorial Auditor were moved down town. Early in January, 1904, the Department of Public Works and the Irrigation Office were moved in. There can be no question about the advantages to be derived from having all the departmental offices together in one building, and greater efficiency can be expected from the staff, and, in addition, the physical comfort of the individual members thereof in stormy weather will be very much added to. The vault accommodation although not arranged to the best advantage, will be ample for the safe keeping of all Government records. The warehouse belonging to the

Department of Indian Affairs was turned over to the North-West Government last year, and has been removed from its former location adjoining South Railway street to a point immediately north of the C.P.R. depot where the railway company has issued a lease for the building and yard room.

NORMAL SCHOOL.

Arrangements have been continued with the Public School Board of Regina to continue the agreement made with them for normal school accommodation during the coming year. With the growth in the formation of school districts throughout the Territories there is a growing demand for well qualified school teachers, and in order that they may be properly prepared for the work they are called upon to perform normal training is essential. Owing to the vast extent of our country many teachers are called upon to come from a long distance at heavy expense which they can ill afford to bear, to take the normal school course, and it will not be many years until more than one such institution for this important work will have to be provided.

REPAIRS TO PUBLIC WORKS.

As has already been stated, no serious damage was done by floods to public works as occurred in 1902. However, the work of improving and repairing existing structures was carried on and more new bridges were built than in 1902. The bank protection in connection with the bridge over the Bow river at Canmore was completed last spring and the results are very satisfactory, but additional dykes will be required to make the work complete. This matter has been referred to the Dominion Government, who have undertaken to carry it through.

The steel bridge at Pincher Creek over the stream of the same name was raised to place it at a safer elevation from possible floods, dykes and protection works being added.

The Mission bridge over the Elbow river at Calgary was refloored and is now in very good condition. The department is experiencing some trouble in maintaining bridge floors, owing to their short life, where the traffic is heavy, and inquiries were made last fall from eastern bridge companies with a view of obtaining a more serviceable description of bridge flooring. It would seem that traction engines are a large factor in damaging bridge floors.

Other bridges deserving of special note will be referred to further on in this report.

CONSTRUCTION OF BRIDGES.

Of the two hundred and seven bridges dealt with during the season it must be noted that, as explained before, one hundred and twenty-seven of these were new structures as compared with seventy-four new bridges built in 1902; a large number of those erected were provided with steel superstructures and in consequence are of a more permanent character than those built wholly of wood. Expenditure in connection with the construction, reconstruction and repairs of bridges was \$191,917.10 as compared with \$146,633.11 the year before. The usual schedule of bridges constructed, reconstructed and repaired during the year follows, and in addition a schedule is appended showing the number of bridges in the Territories having iron or steel superstructures.

SCHEDULE OF Bridges constructed, rebuilt and repaired, 1903.

- Antler creek secs. 20/21-2-30w1. Reflooring.
 Antler creek, south, secs. 1/2-2-31w1. New 14 ft. span on framed bents.
 Antler creek, south, secs. 13/24-7-33w1. New 16 ft. span on framed bents.
 Arm river sec. 13-24-27/28w2. New 3-20 ft. span on pile bents.
 Arm river secs. 22/27-25-28w2. New 3-20 ft. span on pile bents.
 Arm river secs. 10/15-23-27w2. New 3-20 ft. span on pile bents.
 Arm river secs. 3/24-25/26-28w2. New 3-20 ft. span on pile bents.
 Beaupre creek sec. 15-26-5w5. New 20 ft. span on pile bents.
 Blindman river secs. 3/34-39/40-1w5. New 80 ft. steel span, 2-20 ft. spans at one end and 1-20 ft. span at other. All on piles.
 Blindman river secs. 21/28-40-1w5. Repairs.
 Beaver creek sec. 5-56-19w4. Repairs.
 Beaver creek sec. 31-30-4/5w3. Rebuilt as 30 ft. wooden truss on piles.
 Beaverdam creek sec. 2-30-2w5. New 3-20 ft. spans on pile bents.
 Bigstone creek sec. 32-46-24w4. Repairs.
 Buggy creek secs. 19/20-18-19w2. Rebuilt on frame bents.
 Buggy creek secs. 21/28-18-17w2. Rebuilt on 18 ft. span frame bents.
 Big river, sec. 35-52-8w3. 50 ft. wooden truss (new) 2-12 ft. spans, south end.
 Bear creek, secs. 1/6-44-19/20w2. New 20 ft. span.
 Broken Shell creek, secs. 25/30-8-16/17w2. New 1-20 ft. and 1-12 ft. spans on pile bents.
 Bow river (Bow Marsh). Repairs (double floor).
 Cottonwood creek, secs. 24/25-17-22w2. Repairs.
 Cook's creek, secs. 22/27-7-1w2. New 16 ft. span on frame bents.
 Cussed creek, secs. 3/4-30-9w2. New 20 ft. span on pile bents.
 Creek, unnamed, secs. 27/28-16-17w2. Rebuilt 2-16 ft. spans on pile bents.
 Creek, unnamed, secs. 17/18-16-26w2. New 16 ft. span on pile bents.
 Creek at St. Albert. Rebuilt 20 ft. span on pile bents.
 Creek, sec. 17-6-1w5. New 1-20 ft. on pile bents.
 Creek, secs. 13/14-46-27w2. Repairs.
 Creek, secs. 13/14-2-27w4. New 20 ft. span on pile bents.
 Creek, secs. 2/35-5/6-1w5. New 20 ft. span on pile bents.
 Creek, secs. 8/9-18-8w2. New 18 ft. span on frame bents.
 Creek, secs. 22/27-53-23w4. Repairs.
 Creek, secs. 31/6-16/17-26w2. New 12 ft. span on frame bents.
 Creek, sec. 5-54-25w4. Rebuilt 16 ft. span on pile bents.
 Creek, secs. 20/29-16-31w1. New 2-20 ft. spans on pile bents.
 Creek, secs. 25/19-16-31/32w1. New 1-20 ft. span on pile bents.
 Creek, secs. 16/17-26-1w5. Grading approaches.
 Creek, secs. 32/33-26-1w5. Grading approaches.
 Creek, sec. 16-29-3w5. New 20 ft. span on frame bents.
 Creek, sec. 29-21-12w2. New 16 ft. span on frame bents.
 Creek, sec. 30-31-12w2. New 16 ft. span on frame bents.
 Creek, secs. 4/33-33/34-21w4. New 20 ft. span on pile bents.
 Creek, secs. 25/30-42-2/3w3. Repairs.
 Creek, secs. 19/30-42-2w3. Repairs.
 Creek, secs. 13/14-54-19w4. New.
 Creek, sec. 4-53-22w4. Reconstruction.
 Creek, sec. 5-53-22w4. Reconstruction.
 Creek, secs. 6/31-25/26-3w2. Repairs.
 Creek, secs. 2/11-19-1w2. New 2-20 ft. spans on pile bents.
 Creek, sec. 16-2-26w4. New 20 ft. span on pile bents.
 Creek, secs. 21/28-16-5w2. New 16 ft. span on pile bents.
 Creek, secs. 23/26-35-28w4. Repairs.
 Creek, secs. 4/9-43-3w3. New 30 ft. wooden truss on pile abutments.
 Creek, secs. 4/5-47-27w2. Grading.
 Creek, sec. 24-48-26w2. Repairs.
 Creek, secs. 32/5-45a/46a-26w2. Reconstruction 12 ft. span.
 Creek, secs. 23/26-53-22w4. New 16 ft. span on pile bents.
 Creek, sec. 34-52/53-24w4. New 2-20 ft. spans on pile bents.
 Creek, secs. 19/30-55-19w4. New 20 ft. span on pile bents.
 Creek, secs. 34/2-54/55-22w4. New 20 ft. span on pile bents.
 Creek, secs. 33/34-26-4w2. Repairs to approaches.
 Creek, sec. 33-15-4w2. Repairs to approaches.
 Creek, sec. 7-49-23w4. Reconstruction small bridge.
 Creek, sec. 9-49-23w4. Reconstruction small bridge.
 Creek, secs. 1/36-15/16-8w2. New 1-20 ft. span on frame bents.

Creek, Edmonton-Athabasca Landing trail at Two Lakes. 200 yards grading.

Creek, secs. 28/33-29-4w5. New small bridge.

Creek, secs. 28/29-29-4w5. New 16 ft. span on frame bents.

Creek, sec. 11-21-13w2. New 16 ft. span on frame bents; grading not done.

Creek, sec. 36-14-4w2. New 2-20 ft. spans on pile bents; grading not done.

Creek, secs. 6/31-25/26-3w2. Repairs.

Creek, secs. 25/30-42-2/3w3. Repairs.

Creek, sec. 3-47-27w2. Repairs.

Cook's creek, secs. 21/22-7-1w2. New 16 ft. span frame bents.

Creek, secs. 31/32-28-4w5. New small bridge.

Creek, secs. 27/28-27-4w2. Repairs to approaches.

Creek, secs. 11/12-19-1w2. New 2-20 ft. spans on pile bents.

Creek sec., 11-2-27w4. Reconstruction 20 ft. span on frame bents.

Coal Lake creek, sec. 25-46-23w4. New 20 ft. and 18 ft. span on pile bents.

Daley creek, secs. 10/11-10-27w4. New 4-20 ft. spans on pile bents.

Dog Hide creek, sec. 1-45-15w2. New 2-20 ft. spans on pile bents.

Drain No. 4, sec. 8-53-24w4. New additional grading in the spring.

Drain No. 4, sec. 9-53-24w4. New additional grading in the spring.

Deep creek, secs. 11/12-55-21w4. Rebuilt 2-20 ft. spans on pile bents.

Deer creek, sec. 6-29-7w2. Rebuilt 40 ft. wooden truss, 20 ft. approach on piles.

Dog Pound creek, sec. 4-33-3w5. New 50 ft. wooden truss. 1-20 ft. span one end and 2-20 ft. spans at the other; all on piles.

Dried Meat creek, secs. 15/16-45-19w4. New 30 ft. wooden truss on pile abutments.

Elbow river (Mission bridge). Repairs.

French Flat, secs. 5/32-6/7-1w5. 3 new small bridges 16 ft. spans on pile bents.

Five Mile coulee, sec. 15-9-29w4. New.

Gull Lake Outlet, secs. 34/35-40-1w5. New 30 ft. wooden truss and 1-20 ft. span on piles.

Goose Hunting creek, secs. 21/28-45-20w2. New 2-18 ft. spans (pile).

Horse creek, sec. 32-27-4w5. New.

Hanging Hide creek, sec. 6-45-15w2. New 2-20 ft. span on pile bents.

High Hill creek, secs. 9/10-18-23w2. New 20 ft. span on frame bents.

High Hill creek, secs. 27/28-18-23w2. New 20 ft. span on frame bents.

Hislip creek, secs. 3/34-7-8-4w2. New 18 ft. span on frame bents.

High river, at High River village. Repairs to floor.

Hasting's creek, secs. 19/24-51-18w4. Grading.

Long creek, secs. 35/36-3-11w2. New 4-20 ft. spans on pile bents.

Long creek, secs. 10/15-2-8w2. New 4-20 ft. spans on pile bents.

Long creek, secs. 28/29-9-15w2. New 5-20 ft. spans on pile bents.

Little Red Deer river, secs. 19/30-35-15w5. Rebuilt 2-60 ft. wooden trusses on piles.

Little Red Deer river, sec. 32-34-2w5. New 80 ft. steel span, 2-20 ft. spans at one end and 1-20 ft. span at the other all on pile substructures.

Little Cut Arm creek, sec. 11-18-33w1. New 2-20 ft. spans on pile bents.

Little Cut Arm creek, secs. 23/26-19-1w2. New 2-20 ft. spans on pile bents. Additional grading in spring.

Leather river, secs. 3/31-44/45-16w2. New 2-20 ft. spans on pile bents.

Loon creek, secs. 32/5-21/22-17w2. New 2-14 ft. spans on frame bents.

Midnapore slough, sec. 14-22-1w5. New 20 ft. span on pile bents.

Meadow creek, secs. 31/32-11-27w4. New 3-20 ft. spans on pile bents.

Maple creek, secs. 15/16-9-26w3. New 20 ft. span on pile bents.

McFarlane's creek, secs. 12/13-46-1w3. Repairs.

McFarlane's creek, rebuilt 2-12 ft. spans on pile bents.

McFarlane's creek, sec. 36-46-1w3. New 2-12 ft. spans on pile bents.

Moose Jaw creek, secs. 14/15-15-25w2. Rebuilt 30 ft. wooden truss on double pile piers; additional grading in spring.

Moose Jaw creek, secs. 3/4-15-23w2. New 30 ft. wooden truss and 2-20 ft. spans at each end on piles.

Morrison creek. New 3-16 ft. spans on frame bents.

Maple creek, sec. 12-44-20w2. Repairs.

Maple creek, sec. 9-11-26w3, near barracks. Repairs.

Mack's creek, sec. 33-45a-25w2. Grading approaches.

Medicine Lodge coulee, sec. 1-8-4w4. New 2-20 ft. spans on frame bents.

Mosquito creek, secs. 14/15-16-28w4. Grading approaches.

Moose Mountain creek, sec. 36-13-4w2. New 2-20 ft. spans on pile bents; will require additional grading.

Moose creek, tp. 56-5w4. Repairs.

- Maple creek, sec. 16-9-26w3. New 20 ft. span on pile bents.
 Mill creek, secs. 21/28-52-24w4. Repairs.
 Many Bone creek, secs. 3/4-16-17w2. Repairs.
 Moose Mountain creek (branch of), secs 3/34-7/8-4w2. New 18 ft. span on frame bents.
 Moose Mountain creek, secs. 9/10-8-5w2. New small bridge.
 Moose Mountain creek, secs 4/5-8-4w2. New 18 ft. span on frame bents.
 Moose Mountain creek, secs. 9-8-4w2. New 18 ft. span on frame bents.
 Medicine Lodge coulee, secs. 12-8-4w4. New 2-20 ft. spans.
 Moose Mountain creek, secs. 12/13-9-7w2. New 28 ft. bridge on frame bents.
 Nanton creek, secs. 7/18-16-28w4. New 3-20 ft. spans on pile bents.
 Nine Mile creek, sec. 32-3-24w4. New 20 ft. span on pile bents.
 Nose creek, sec. 12-24-1w5. Repairs to approaches.
 Old Man's creek, sec. 24-53-23w4. Reconstruction.
 Pahonan creek, sec. 12-48-21w20. Repairs.
 Pahonan creek, sec. 28-47-21w2. New 18 ft. span and 8 ft. span on piles.
 Pincher creek at village. Repairs raising bridge 22 inches, grading approaches, reflooring and building crib dykes.
 Pilon's creek, secs. 33/34-54-23w4. New 16 ft. span on pile bents.
 Pearl creek, sec. 25-19-7w2. New 18 ft. span on frame bents.
 Pearl creek, secs. 2/35-19/20-7w2. New 18 ft. span on frame bents.
 Pruden's creek, secs. 19/24-51-18/19w4. New 2-17 ft. spans on pile bents.
 Pipestone creek, secs. 8/9-15-4w2. Reconstruction 2-20 ft. spans on pile bents; additional grading in spring.
 Pipestone creek, sec. 21-11-33w1. Reconstruction 3-20 ft. spans on pile bents.
 Pipestone creek, sec. 30-13-33w1. Reconstruction 40 ft. wooden truss on double pile piers with 20 ft. approach at each end.
 Pipestone creek, secs. 34/35-13-1w2. Reconstruction 5-20 ft. spans on pile bents; additional grading required.
 Pheasant creek, secs. 2/3-20-11w2. Reconstruction 18 ft. span on frame bents.
 Pahonan creek, secs. 10/15-46-23w2. New 20 ft. span on pile bents.
 Pipestone creek, secs. 19/24-47-24/25w4. New 30 ft. wooden truss 16 ft. span on pile bents each end.
 Pipestone creek (branch of) secs. 7/12-16-7/8w2. New 2 bridges 20 ft. spans each.
 Qu'Appelle river, sec. 22-18-9w2. Reconstruction 80 ft. steel span on pile abutments.
 Ross creek, secs. 13/14-54-22w4. New 2-18 ft. spans on pile bents.
 Ross creek, sec. 28-12-5w4. Repairs.
 Ross creek, sec. 12-53-19w4. New 2-20 ft. spans on pile bents.
 Ross creek, sec. 5-54-21w4. Repairs.
 Ravine, sec. 35-20-1w5. New 20 ft. span on piles.
 Ravine, secs. 14/23-20-1w5. New 10 ft. culvert.
 Rosebud creek, secs. 12/13-30-29w4. New 4-20 ft. spans on piles.
 Red Deer Horn creek, secs. 5/8-19-30w1. New 16 ft. span on pile bents.
 Red Deer Horn creek, secs. 22/23-19-31w1. New 16 ft. span on pile bents.
 Red Deer Horn creek, secs. 13/14-19-31w1. New 16 ft. span on pile bents.
 Red Deer creek, secs. 3/4-47-27w2. Repairs (grading).
 Ravine on river lot 26 tp. 54-22w4. Reconstruction 30 ft. wooden truss 20 ft. span each end.
 Ravine secs. 14/15-20-1w5. 3 culverts 2-10 ft., 1-14 ft.
 Red Deer creek on trail to Adam's ferry. Repairs.
 Red Deer creek, sec. 35-47-25w2. Grading approaches.
 Red Deer creek, sec. 30-47-25w2. Grading approaches.
 Sturgeon river, sec. 2-55-1w5. New 40 ft. wooden truss, 2-20 ft. spans at each end on pile substructures.
 Sturgeon river, St. Albert. Repairing floor.
 Sturgeon river, sec. 8-55-24w4. New 50 ft. wooden truss and 20 ft. span at each end all on pile substructures.
 Sturgeon river, sec. 4-56-23w4. New 50 ft. wooden truss and 20 ft. span at each end all on pile substructures.
 Sturgeon river, sec. 14-56-23w4. New 50 ft. wooden truss and 20 ft. span at each end all on pile substructures.
 Spring creek, secs. 12/13-20-21w2. Repairs.
 Spring creek, secs. 27/28-12-32w1. Reconstruction 2-20 ft. spans on pile bents.
 Spring creek, secs. 18/19-20-1w5. New 2-19 ft. span on pile bents and 1-19 ft. culvert.
 Stony creek, secs. 35/36-7-30w1. New 2-20 ft. spans on pile bents.
 Stony creek, secs. 4/5-51-24w4. New 2-20 ft. spans on pile bents. Grading not completed.

- Stony creek, secs. 31/32-29-1w5. Grading approaches.
 Sucker creek, secs. 1/36-29/30-3w5. New 20 ft. and 18 ft. span on pile bents.
 Six Mile creek, sec. 15-8-21w4. New 2-18 ft. spans on pile bents.
 Swift Current creek near Swift Current. Reconstruction 80 ft. steel span on double pile piers planked up. 3-20 ft. spans on one end and 2 at other end all on piles. Material all on ground and construction under way; will be completed early in 1904.
 St. Mary river, near Cardston. Reconstruction 3-125 ft. steel spans and 3-20 ft. at one end all on pile substructure.
 Souris river, secs. 14/15-2-8w2. New 80 ft. steel span on pile piers, 18 ft. span at each end on piles.
 Souris river, secs. 1/2-3-1w2. Repairs.
 Sollman creek, secs. 13/14-54-19w4. New 2-20 ft. spans on pile bents.
 Squaw creek, sec. 22-25-29w2. New 2-20 ft. spans on pile bents.
 Spring creek, secs. 4/5-20-1w5. New 20 ft. span on pile bents.
 Spring creek, sec. 7-21-13w2. Repairs.
 Shell river, tp. 51-8w3. New 50 ft. wooden truss.
 Souris river, secs. 33/34-1-6w2. Repairs.
 Scissors creek, secs. 29/30-16-31w1. New 2-20 ft. span on pile bents.
 Spring coulee, secs. 10/15-30-29w4. New 20 ft. span on pile bents.
 Slough, sec. 24-38-28w4. Culvert put in in vicinity of this bridge.
 Seven Persons' coulee, sec. 30-12-5w4. Repairs.
 Snake creek, secs. 22/23-2-25w4. New 20 ft. span on pile bents.
 Two creeks, secs. 20/21-55-19w4. New 20 ft. span on pile bents.
 Two creeks (branch), secs. 19/30-55-19w4. New 20 ft. span on pile bents.
 Tongue creek, secs. 14/15-19-29w4. Reconstruction 58 ft. consisting of 3 spans on pile bents.
 Thunder creek (branch of), secs. 22/27-16-27w2. New 16 ft. standard pile bridge.
 Two creeks, sec. 20-55-19w4. Reconstruction 2-20 ft. spans on pile bents.
 Vermillion river, secs. 1/36-51/52-15w4. New 2-16 ft. spans on pile bents.
 Vermillion river, secs. 6/36-50/51-14w4. New 2-20 ft. spans on pile bents.
 Whitesand river, secs. 13/14-31-1w2. Reconstruction 50 ft. wooden truss on pile abutments.
 Willow creek, sec. 21-2-24w4. New 2-20 ft. spans on pile bents.
 Willow creek, secs. 19/30-48-1w3. New 24 ft. span on pile bents.
 Wild Cat creek, secs. 10/15-46-23w2. New 20 ft. span on pile bents.
 Weed lake, sec. 12-16-5w2. Repairs.
 Whitemud river, secs. 20/29-50-25w4. New 30 ft. wooden truss, 16 ft. approach at each end. Grading to be done in the spring.
 Wascana creek, Dewdney street, Regina. Repairs.
 Wascana creek, secs. 35/36-15-18w2. Repairs.

List of Steel Bridges.

- Antler creek, Carnduff.
 Antler creek, Elmore.
 Assiniboine river, sec. 24-29-32w1.
 Assiniboine river, Fort Pelly.
 Battle river, secs. 33/34-44-23w4.
 Battle river, at Ponoka.
 Battle river, sec. 33-42-26w4.
 Battle river, sec. 31-45-22w4.
 Blindman river, on Calgary and Edmonton road.
 Blindman river, sec. 16-39-28w4.
 Belly river, Standoff.
 Bow river, Cochrane.
 Cascade creek, Anthracite.
 Elbow river, Mission.
 Elbow river, Weazel Head.
 Fish creek, on Macleod trail.
 High river, Alley's ford.
 High river, Thompson's crossing.
 Kootenia river, Standoff.
 Maple creek at Maple Creek.
 Nose creek, sec. 24-24-1w5.
 Oldman river, near Cowley.
 Qu'Appelle river at Tiree.
 Qu'Appelle river at Hazel Cliffe.

Qu'Appelle river, secs. 23/26-18-10w2.
 Qu'Appelle river, sec. 33-19-21w2.
 Qu'Appelle river, sec. 16-19-7w2.
 Qu'Appelle river, sec. 8/9-18-2w2.
 Qu'Appelle river at Craven.
 Qu'Appelle river at Blackwood crossing.
 Qu'Appelle river, Ross crossing.
 Qu'Appelle river, secs. 19/24-18-8/9w2.
 Qu'Appelle river, sec. 2-18-31w2.
 Qu'Appelle river, sec. 32-17-31w2.
 Qu'Appelle river, Ellisboro.
 Qu'Appelle river, Lumsden.
 Qu'Appelle river, Round lake.
 Red Deer at Red Deer.
 Red Deer at Tindastoll.
 Ross creek at Medicine Hat.
 Saint Mary, sec. 1-2-35w4.
 Seven Person's creek, sec. 30-12-5w4.
 Souris river, sec. 6-1-4w2.
 Souris river, secs. 20/29-1-34w1.
 Souris river, near Glenewan.
 Sturgeon river, tp. 49-26w2.
 Willow creek, near Macleod.
 Willow creek, sec. 29-9-26w4.
 Willow creek, sec. 13-12-28w4.

In addition to the above list of bridges it might be well to state, as intimated in the report for 1902, that the work of reconstructing the Oldman river bridge at Macleod and the Belly river bridge at Lethbridge was delegated to the Territorial Department of Public Works, under authority of an Order of the Governor-General in Council, the bridges to consist of steel superstructures on permanent foundations of concrete, being the first bridges with this class of substructure undertaken by this department.

The progress made with the substructures of both these bridges up to date has been very satisfactory and the bridge at Macleod will soon reach the stage when the steel superstructure can all be put in place. The steel for both points has been on order for some time and a part is already delivered. In order to carry on the work of construction to the best advantage it was found necessary to add to our list of tools and implements a stone crusher, one steam engine, two centrifugal pumps and a number of other articles. These, however, can be used to advantage in the future when permanent foundations of the above named character will take the place of pile and other timber substructures. The designs for the two bridges at Macleod and Lethbridge were prepared and carefully checked by Mr. Stocks, assistant chief engineer, who has had general charge of the work of construction. It was deemed advisable, in addition, to employ the very best and most experienced men available who understood the importance of taking every precaution with concrete work. Mr. D. McKinnon, who has been in the employ of the department for the last two years, was appointed inspector for both points. Owing to the excessive depth to which the excavations in the river beds had to be made the original estimated cost will be exceeded somewhat, and it was considered most advisable to have the piers and abutments rest upon a formation that was known to be safe and unyielding, as well as at such a depth as would not be affected by any changes in the river beds.

The following bridges are worthy of special mention.

Bridge over Blindman river between sec. 34-39, sec. 3-40-1w5.

At this point there has been a great demand for a bridge owing to the difficulty of settlers in the Medicine Lodge hills west of Blindman river in reaching Lacombe and Blackfalds. This difficulty was removed last season by constructing an 80 foot steel bridge with timber approached on a pile substructure.

Bridge over little Red Deer river sec. 32-34-2w5.

This bridge consists of an 80 foot steel span with timber approaches and pile foundation. This structure is a great convenience to all settlers living west of Olds.

Bridge over Little Red Deer river, sec. 19-30-35-1w5.

This structure was built a little over two years ago as a pile trestle bridge, but was damaged by the floods of 1902, and although repaired it was not a suitable structure for the location on account of the river carrying a large amount of drift wood in flood stages. During the past season the bridge was rebuilt and consists of two 60 foot wooden trusses built on pile foundation.

Bridge over St. Mary river near Cardston.

This structure, as mentioned in the 1902 report, was completely destroyed by the floods of that year and great inconvenience resulted to the people of Cardston and those living to the east of the St Mary river in that section of the country. The new bridge is a very fine structure consisting of three 125 foot steel spans and two 20 foot wooden spans all on pile and timber foundations. The location of this bridge was changed to a point slightly down stream from the old site so that it would be less liable to damage from the waters of Lee creek in the event of the recurrence of floods, this stream having been the chief cause of the destruction of the former bridge.

Bridge over Souris river secs. 14/15-2-8w2.

This bridge consists of an 80 foot steel span with a 36 foot wooden trestle making a very suitable and substantial crossing. There was in addition to this bridge a substantial structure consisting of an 80 foot pile trestle bridge constructed over Long Creek enabling settlers to reach Estevan without the previous difficulties encountered.

Bridge over Long creek west of Macoun.

Several requests were received from settlers west of Macoun asking for a bridge west of Long creek. The bridge, consisting of a 100 foot pile trestle, was completed during the past season making a reliable crossing for a great number of the settlers in that locality.

Bridge over Qu'Appelle river at McLean's crossing.

This bridge has been in a bad shape for some years, and a constant source of trouble owing to frequent repairs. On account of the large settlement north of the Qu'Appelle river doing business at Wolseley, it was decided to reconstruct the bridge. The present structure consists

of an 80 foot steel span on pile abutments, thus providing a first class crossing. This brings the number of steel bridges on the Qu'Appelle river up to fifteen, so that it is very apparent the department is endeavouring as far as possible to build structures of a permanent and reliable nature.

Bridge over Swift Current creek near Swift Current.

This stream carries very heavy ice flow and it was found impossible to maintain a pile trestle bridge. Consequently the department decided to reconstruct this structure and an 80 foot steel span over the main channel and 100 feet of pile trestle for approach. The work is pretty well under way, and when completed, which will be early in the year, will make a very first class crossing.

CONSTRUCTION AND MAINTENANCE OF ROADS.

On account of the generally prevailing wet weather of last summer and fall some difficulty was met with in getting road work done, and generally speaking higher prices had to be paid for men and teams, resulting in a measure to reduction in the amount of work done for the money expended. All instructions issued to foremen included a clause to the effect that work would be subject to inspection by the department before payment would be made, and it has since been learned from a number of sources that the class of work performed has, to some extent, been better than that of former years. The question of road making will, however, always be a more or less serious subject to handle in the Territories on account of the lack of materials in a great proportion of its area which are essential in the construction of permanent roadways. Much, however, can be accomplished towards the betterment of the main thoroughfares of travel where the traffic is heaviest by the exercise of good judgment in road construction, and greater efforts should be made in the future than in the past in the proper drainage of the road bed so that in wet seasons the water may get away rapidly.

Last year the sum of \$45,817.77 was expended on road improvement directly by the department in addition to that done by small local improvement districts. It would be well to have an officer of the department deputed to take up the work of road construction specially, and to look into what is being done in the way of permanent road construction in those states across the line where similar conditions prevail. It would also be well to have an officer of this kind attend the many meetings of Good Roads Associations held in Canada and the United States, and thus become acquainted with almost every condition met with.

SCHEDULE of road improvements undertaken during the year.

Between secs. 15/16, 9/10-19-1w2.
South of sec. 3-19-1w2.
Between secs. 21/28-16-4w2.
Hills north and south of Sunnymead bridge.
Between Burke's bridge and Wapella.
To Whitewood through tp. 16-2w2.
Between secs. 35/36, 22/27, 20/29-16-2w2.
North of sec. 31-14-1w2.
Sloughs through tp. 12-1w2.

Between secs. 4/5-19-1w2.
 Through the centre of tp. 18-3w2.
 Between secs. 1/2-19-2w2.
 Between secs. 35/36-17-2w2.
 Between secs. 27/28-17-2w2.
 Between Sunnymead and Whitewood.
 Between secs. 25/30-16-3/2w2.
 Between secs. 34/35-13-1w2.
 Hill at Fairmede school.
 Road to Percival through tp. 16, between res. 3/4w2.
 Sloughs in centre of tp. 16-1w2.
 Between secs. 3/10-19-1w2.
 North of sec. 34-13-2w2.
 Between secs. 10/15-14-2w2.
 Between secs. 9/10-14-2w2.
 Between secs. 5/6, 17/18, 19/20-16-2w2.
 Road to Wapella from the south.
 Road east from Wapella, between secs. 10/15-15-34w1.
 North from Red Jacket through tp. 14-33w1.
 North from Moosomin.
 South from Moosomin.
 South from Fleming through tp. 12-30w1.
 Fleming east to Manitoba boundary, tp. 13-30w1.
 Rocanville to the west, tp. 17-33w1.
 Between tps. 13/14-32w1.
 Hills at Tantallon between secs. 15/16-18-32w1.
 Moose Mountain trail through tp. 13-32w1.
 Moosomin to Fleming, tp. 13-30w1.
 Between secs. 28/29-12-31w1.
 Roads in District No. 305, tp. 15-31w1.
 On sec. 15-13-32w1.
 Between secs. 27/34-21-32w1.
 Roads in District No. 315, tp. 12-33w1.
 Approaches to bridge between secs. 29/30-13-33w1.
 Roads in District No. 316, tp. 13-33w1.
 Roads in District No. 317, tp. 14-33w1.
 Hill Farm road, tp. 19-10w2.
 Pheasant Forks road, tp. 17-10w2.
 East Moffat road between secs. 11/12, 23/24-16-10w1.
 Ellisboro road between secs. 29/30-18-9w2.
 East of sec. 11-19-11w2.
 On sec. 31-16-9w2.
 West from Wolseley, tp. 17-10w2.
 South from Sintaluta, tp. 17-11w2.
 Wolseley to Summerberry, tp. 17-9w2.
 West Moffat road, tp. 15-10w2.
 Between secs. 31/32-14-9w2.
 Between secs. 33/34-14-9w2.
 Between secs. 3/4-17-10w2.
 Between secs. 26/27-16-9w2.
 North of sec. 33-15-9w2.
 On sec. 31-16-9w2.
 Roads in District No. 353, tp. 18-9w2.
 Roads in District No. 358, tp. 18-10w2.
 On sec. 7-26-3w2.
 Between secs. 30/31-24-2w2.
 Between secs. 21/28-25-3w2.
 Between secs. 22/27-25-3w2.
 Between secs. 26/27-26-3w2.
 Between secs. 20/29-26-3w2.
 East of Yorkton, north of sec. 31-25-3w2.
 Road to Manson bridge.
 Between secs. 16/17-28-3w2.
 Between secs. 8/9-28-3w2.
 Between secs. 7/18-24-1w2.
 West of sec. 18-25-2w2.
 Between secs. 16/21-23-2w2.
 Between secs. 33/34-22-2w2.
 Between secs. 9/10-24-2w2.
 Between secs. 11/12-24-2w2.
 Road to Kinbrae, tp. 23-1/2w2.

Between secs. 22/27-21-31w1.
 Between secs. 21/28-21-31w1.
 Between secs. 14/15-21-31w1.
 On sec. 18-20-32w1.
 Between secs. 23/24-21-33w1.
 On sec. 6-23-1w2.
 Between secs. 17/18-22-32w1.
 Between secs. 7/8-22-32w1.
 Between secs. 5/6-22-32w1.
 Roads in District No. 127, tp. 25-3w2.
 Clumber crossing of Cut Arm.
 Between secs. 17-20-22-32w1.
 Between secs. 21/22-22-32w1.
 Between secs. 28/27-22-32w1.
 North of tp. 24-30w2.
 West of sec. 19-24-1w2.
 Blake road leading to the German and Galician settlements.
 Cross country grade between Blake road and Rothbury.
 From Blake road to Beresina, tp. 23-32w1.
 Reservoir, sec. 21-23-30w1.
 Roads in District 8, tp. 23-1w2.
 Roads in District 84, tp. 25-2w2.
 Between secs. 11/12/13/14-14-5w2.
 Between tps. 15/16-8w2.
 On sec. 35-15-8w2.
 Roads in District 102, tp. 15-6w2.
 Roads in District 349, tp. 19-8w2.
 Grenfell-Hyde road between secs. 32/33-18-7w2; between secs. 3/4-19-7w2;
 between secs. 32/33-17-7w2; between secs. 21/22-17-7w2.
 Between secs. 17/18-16-7w2.
 On sec. 8-16-7w2.
 On sec. 6-16-7w2.
 Between secs. 31/32, 29/30-15-7w2.
 North bank of Qu'Appelle river between secs. 21/22-19-7w2.
 Grenfell to Tiree on sec. 17-17-7w2.
 Between secs. 13/14, 23/24, 25/26-18-8w2.
 Between secs. 4/5-17-7w2.
 North of sec. 35-19-7-w2.
 West of sec. 19-16-7w2.
 Tiree to Pheasant Forks, from sec. 10-19a-8 to sec. 22-21-9w2.
 Between secs. 35/36-15-5w2.
 Valley trail on sec. 3-19a-8w2.
 Culverts in District 347, tp. 17-8w2.
 Between secs. 11/14-15-5w2.
 Roads in District 346, tp. 16-8w2.
 Roads in District 348, tp. 18-8w2.
 Between secs. 3/4-9-2w2.
 West of secs. 18, 19, 30-11-2w2.
 Approaches to bridge between secs. 13/24-7-30w1.
 Roads in District 166, tp. 11-33w1.
 Roads in District 180, tp. 7-4w2.
 Roads in District 238, tp. 8-5w2.
 Roads in District 181, tp. 9-6w2.
 Approaches to Antler creek bridge sec. 2-3-30w1.
 Approaches to bridge west of sec. 18-2-31w1.
 Between secs. 5/6-3-31w1.
 Between secs. 15/16, 10/15-2-32w1.
 Road east of sec. 2-2-32w1.
 Approaches to Antler creek bridge.
 Between secs 19/20-1-33w1.
 Between secs. 34/35-1-33w1.
 Between secs. 22/23-1-33w1.
 Between secs. 32/33-1-33w1.
 Between secs. 33/34-1-33w1.
 North of sec. 33-1-33w1.
 East of sec. 36-3-33w1.
 On sec. 13-3-1w2.
 East of secs. 36, 25-3-1w2.
 Approaches to Glen Ewen bridge between secs. 1/2-3-1w2.
 West of secs. 19, 30-5-1w2.
 Through centre of tp. 30-8-1w2.

Roads in District 168, tp. 1-2w2.
 Roads in District 268, tp. 2-2w2.
 Oxbow south in tp. 3-2w2.
 On sec. 24-3-2w2.
 Approaches to bridge north of sec. 33-3-3w2.
 Roads in District No. 145, tp. 2-2w2.
 Alameda to Frobisher, tp. 4-3w2.
 Between secs. 20/29-5-3w2.
 North of secs. 31 to 34-2-4w2.
 Between secs. 35/36, 34/35-3-4w2.
 North of sec. 33-3-4w2.
 Between secs. 1/2, 11/12, 2/3, 10/11-4-4w2.
 Between secs. 3/4, 9/10, 15/16, 21/22, 27/28, 33/34-3-5w2.
 East of sec. 24-2-7w2.
 East of sec. 13-2-7w2.
 Between secs. 26/27, 34/35-2-7w2.
 Between secs. 19/20, east 5 miles, tp. 2-7w2.
 Between secs. 1/2, 11/12, 13/14-3-7w2.
 East of secs. 1/12-4-7w2.
 Between secs. 10/11, 2/3-2-8w2.
 Between secs. 24/25-2-8w2.
 Between secs. 2/3, north 5 miles, tp. 3-8w2.
 Yorkton-Reaman road.
 Yorkton-Touchwood road.
 Yorkton-Broadview road.
 Approaches to Ebenezer bridge between secs. 27/28-27-4w2.
 Approaches to Deer creek bridge on sec. 6-29-7w2.
 Trail from Fort Qu'Appelle to Macdonald hills. Hill between secs. 24/25-21-14w2.
 Hill on trail from Fort Qu'Appelle to station.
 Kutawa to Wishart settlement in tp. 28-16w2.
 Fort Qu'Appelle to Kutawa, sec. 16-20-12w2.
 Township line between tps. 19/20-16w2.
 Between secs. 4/5-21-13w2.
 Roads in District 190, tp. 21-12w2.
 Roads in District 462, tp. 22-12w2.
 Roads in District 426, tp. 21-13w2.
 Roads in District 399, tp. 21-14w2.
 Between secs. 21/22-7-14w2.
 Between secs. 29/30-8-14w2.
 Between secs. 31/32-8-14w2.
 Between secs. 5/6, 7/8, 17/18, 29/30, 31/32-9-14w2.
 North of secs. 10, 11, 12-8-14w2.
 West of sec. 12-8-14w2.
 One mile south and west of sec. 6-11-16w2.
 Four miles north and south of Weyburn, tp. 7-14w2.
 From sec. 36-8 to sec. 18-7, all in re. 15w2.
 Between secs. 26/27, 34/35-8-14w2.
 West of secs. 16, 21, 28-7-14w2.
 Between secs. 35/36-10-17w2.
 Between secs. 14/15, 4 miles north, tp. 10-16 and west of 7, all w2.
 Between secs. 35/36, 3 miles south, tp. 9-16w2.
 Between secs. 14/15, 11/14-10-17w2.
 Between secs. 19/20-10-16w2.
 Between secs. 12/13-10-16w2.
 North of sec. 31-8-14w2.
 North of secs. 7/11-9-14w2.
 West of secs. 4, 9, 16-9-14w2.
 North of sec. 32-10-16w2, then east 2 miles and north 2 miles.
 Between secs. 10/15, then 2 miles west, tp. 10-17w2.
 West and north 2 miles each way of sec. 22-11-17w2.
 Two miles south of secs. 4/5-10-16w2.
 Between secs. 33/34, 27/28-9-15w2.
 Between secs. 20/29, 21/28-9-15w2.
 From south-east corner of sec. 18, east 5 miles, tp. 10-15w2.
 Between secs. 20/29, 19/30, 24/25-18-14w2.
 Between secs. 25/26, 35/36-18-15w2.
 Between secs. 1/2 and south of sec. 1-19-15w2.
 Between secs. 34/35-18-15w2.
 Between secs. 28/29, 32/33-17-14w2.
 Between secs. 20/21-18-14w2.

South of sec. 29-19-12w2 and through adjoining sections.
 Between secs. 21/28, 2 miles west and 4 miles east, tp. 13-14w2.
 Between secs. 20/21, 8/9, 4/5-13-14w2.
 Between secs. 7/12-18-14/15w2.
 Between secs. 22/23-17-13w2.
 Between secs. 1/6-18/17-12w2.
 Roads in District 19, tp. 20-11w2.
 Grading roads in Indian Head municipality.
 Between secs. 7/18-18-12w2.
 Between secs. 19/30-18-14w2.
 Between secs. 24/25-19-14w2.
 Strassburg-Hay lake trail.
 From Craven north to sec. 2-21-21w2.
 Strassburg to Craven.
 Marieton to Craven.
 Roads in Marieton district.
 West of secs. 30/31-17-19w2.
 Marieton to Pengarth.
 Roads in tp. 21-19w2.
 Between tps. 21/23 through rs. 17, 18, 19w2.
 From Regina to Arat.
 From Lumsden to Craven.
 Between secs. 9/10-18-17w2.
 Sloughs in tp. 17-22w2.
 Roads in District 138, tp. 18-17w2.
 Balgonie to St. Josephs.
 Culvert east of bridge over Wascana creek at Barracks.
 Roads in District 107, tp. 18-19w2.
 Roads in District 108, tp. 19-19w2.
 Roads in District 91, tp. 18-20w2.
 Roads in District 109, tp. 19-20w2.
 Roads in District 118, tp. 19-21w2.
 Roads in District 243, tp. 17-22w2.
 Between secs. 16/17-17-19w2.
 Between secs. 31/32-14-21w2, and 2 miles south.
 Between secs. 14/15, 3 miles south tp. 14-22w2.
 Between secs. 21/22, 4 miles south tp. 14-21w2.
 Between secs. 19/30-14-21w2.
 Along tps. 12/13 between res. 17/18w2.
 Between secs. 4/5-17-22w2.
 Between secs. 26/27, 23/26, 24/25-17-17w2.
 North of secs. 35/36-17-17w2.
 Approaches to Wascana creek bridge between secs. 35/36-15-18w2.
 Between sections 7/8-17-19w2.
 Roads in District 193, tp. 16-20w2.
 Roads in District 196, tp. 17-20w2.
 Roads in District 488, tp. 16-21w2.
 Roads in tp. 14-22w2.
 Approaches to bridge sec. 29-15-23w2.
 Approaches to Whittig's bridge between secs. 17/18-45-18w2.
 Approaches to Beatty's bridge between secs. 20/29-44-18w2.
 Approaches to Lamey's bridge between secs. 10/15-44-18w2.
 Main road through tp. 46-23w2.
 Main road to Prince Albert north of secs. 22/23/24-45-22w2.
 Roads in tp. 45-21w2.
 East of sec. 34/27-44-21w2.
 Between secs. 11/14, 12/13-44-19w2.
 Between secs. 9/10-44-18w2.
 East of secs. 1/12/13-45-19w2.
 Corduroying High Portage.
 North and east of sec. 10-45-17w2.
 East of sec. 16, 21, 28, 33-47-21w2.
 East of sec. 19, 30, 31-46-21w2.
 Between secs. 21/28, 19/30-45-20w2.
 North of secs. 11 and 12-44-22w2.
 East of secs. 13, 24-47-23w2.
 East of secs. 12, 13, 24-45-23w2.
 North of secs. 7, 8, 9, 10-45a-22w2.
 East of secs. 16, 21-44-21w2.
 East of secs. 3, 10, 15, 22-44-21w2.
 Roads in District 386, tp. 45-18w2.

Roads in Lepine settlement.
 Mills on north side of Saskatchewan river at St. Louis crossing.
 Roads in the Crooked lake
 Domremy to in tp. 33-4w2.
 Between tps. 45/46-26w2.
 Between secs. 19/20, 19/30, 31/32-41-1w3.
 Between secs. 33/34, south 5 miles tp. 41-1w3.
 Approaches to ferry over Saskatchewan river near Fish creek.
 From Roman Catholic Mission to Batoche ferry.
 From Batoche ferry across One Arrow Indian reserve to Crooked lake.
 Mentinaw to Hoodoo.
 Road in tp. 44-25w2.
 On sec. 18-46-26w2.
 Approaches to Mac's creek bridge on sec. 33-46a-25w2.
 Approaches to bridge on sec. 35-47-25w2.
 On sec. 30-47-25w2.
 Kirkby's culvert tp. 48-26w2.
 Approaches to Adam's bridge between secs. 3/4-47-27w2.
 Carlton ferry to Duck Lake.
 Deepening creek on sec. 9-42-2w3.
 North of secs. 31, 32-42-2w3.
 West of Rosthern, tps. 42, 43-3w3.
 Between secs. 7/18-43-2w3.
 On sec. 23-46-1w3.
 On sec. 14-46-1w3.
 On sec. 11-46-1w3.
 Between secs. 12/13-46-1w3.
 Wingard ferry to Carlton trail.
 Green lake trail near Mistawasis.
 Wingard ferry to Snake plains.
 Carlton to Aldina.
 Winter road on Batoche hill, sec. 19-43-1w3.
 Duck Lake trail between Duck Lake and Macdowall.
 Carlton trail on sec. 24-46-1w3.
 Approach to Batoche ferry, tp. 44-2w3.
 Roads in District 336, tp. 46-3w3.
 Hill leading down to Eagle Hill creek.
 Between secs. 23/26-36-7w3.
 Between secs. 15/16-38-6w3.
 Between tps. 35/36-3-4w3.
 Road north and south in re. 4, from north of tp. 37 to south of tp. 36w3.
 South of secs. 28, 29 and 30-36-4w3.
 Between secs. 36/31, 31/32-36/37-5-6w3.
 Osler west between secs. 24/25, four miles, tp. 39-5w3.
 Approaches to ferry landing, tp. 36-5w3.
 West of secs. 6, 7-37-5w3.
 Between secs. 29, 30-42-6w3.
 Approaches to bridge, sec. 9-41-12w3.
 Onion Lake to Moose lake.
 Onion Lake to Cold lake.
 Battleford to Meadow lake.
 Between tps. 47/48-17w3.
 Landing at Battleford ferry.
 Moose lake to St. Paul des Metis.
 Battleford ferry to Jackfish lake.
 Lloydminster to Saskatchewan river.
 Between sec. 24/25, west 3 miles, tp. 16-26w2.
 East of sec. 20-17-26w2.
 Culverts in District 205, tp. 17-28w2.
 Between secs. 7/18-17-25w2.
 Approaches to bridge, sec. 9-16-26w2.
 Between secs. 5/6-16-24w2.
 North of sec. 36, west 5 miles, tp. 15-24w2.
 West of sec. 19 and north of 19-15-25w2.
 Between secs. 9/16, west 3 miles, tp. 5-27w2.
 East of secs. 2, 11, etc., 19-27w2.
 North of secs. 25, 26-16-26w2.
 On sec. 17-16-26w2.
 Subway on sec. 1-17-26w2.
 Roads in District 276, tp. 17-26w2.
 Roads in District 200, tp. 16-27w2.
 Roads in District 36, tp. 17-27w2.

Roads in District 266, tp. 18-28w2.
 Roads in District 205, tp. 17-28w2.
 On secs. 14, 7-10-27w3.
 Sec. 1-8-29w3.
 On sec. 20-7-28w3.
 On sec. 20-9-26w3.
 North of sec. 9-11-25w3.
 On sec. 23-10-24w3.
 On sec. 30-10-23w3.
 On sec. 19-10-22w3.
 Between secs. 31, 32-10-25w3.
 On sec. 17-10-26w3.
 On sec. 30-19-14w3.
 Between secs. 35/36-19-15w3.
 Between secs. 24/25-10-25w3.
 Between secs. 10/15-11-25w3.
 Porter's Hill, tp. 12-5w4.
 Between secs. 22/27-13-6w4.
 Between secs. 28/29-11-5w4.
 North of sec. 31-8-1w4.
 Between secs. 13/24-9-1w4.
 Josephsburg to Sawmill, tp. 8-3w4.
 Sec. 1-2-25w4.
 Between secs. 14/15-2-25w4.
 Between secs. 22/23-2-25w4.
 Approaches to bridge on Workman coulee, sec. 16-2-26w4.
 Sec. 6-2-25w4.
 Between secs. 22/23-2-25w4.
 Approaches to bridge over Five Mile coulee.
 Around lake between secs. 17/18-3-24w4.
 Between secs. 9/10-3-24w4.
 Section 15-2-26w4.
 On sec. 16-2-26w4.
 On sec. 17-2-26w4.
 On sec. 12-2-27w4.
 Between secs. 10/15-2-25w4.
 Between secs. 35/36-5-22w4.
 On sec. 36-5-22w4.
 West of sec. 30-5-21w4.
 Between sec. 14/15-5-22w4.
 Nelson's hill, sec. 6-3-25w4.
 Between secs. 28/29-2-25w4.
 Between secs. 15/22-2-25w4.
 Approaches to bridge on sec. 11-2-27w4.
 On sec. 29-6-25w4.
 Macleod to Standoff, tp. 8-25w4.
 Approaches to ferry over Old Man river.
 Between secs. 5/6-9-25w4.
 Approaches to bridge between secs. 31/32-11-27w4.
 Between secs. 19/30-7-1w5.
 Stirling-Raymond trail, sec. 19-6-19w4.
 Between secs. 1/2-9-22w4.
 Hill on both sides of bridge over Six Mile coulee, tp. 8-20w4.
 On sec. 1-9-22w4.
 Culverts in District 214, tp. 21-29w4.
 Between secs. 8/17, 9/16-20-1w5.
 From Millarville to Weasel Head bridge across Sarcee reserve.
 Approaches to bridge between secs. 14/15-16-28w4.
 Between secs. 8/17, east $6\frac{1}{2}$ miles, tp. 20-2w5.
 Between secs. 8/9-22-1w5.
 Road through tps. 19, 20, 21-28w4.
 Between secs. 23, 24-22-2w5.
 Roads in District 209, tp. 24-2w5.
 Between secs. 5/6-19-28w4.
 Tp. 19-28w4.
 Between secs. 16/9-19-28w4.
 West of Cayley, tp. 17-29w4.
 North of sec. 32-19-2w5.
 Between secs. 9/16, 8/17-22-1w5.
 From High River to Coal mine and Ings.
 Between tps. 19/20-26, 27w4.

Between secs. 2/3-22-1w5.
 On secs. 2, 8-21-2w5.
 North of sec. 34-17-29w4.
 Between secs. 16/11-16-28w4.
 Between secs. 12/13-16-29w4.
 Between secs. 25/26-18-29w4.
 Between secs. 20/29-20-27w4.
 Calgary and Macleod trail, secs. 27, 11-22-1w5.
 On sec. 20-20-27w5.
 Between secs. 21/28-18-29w4.
 On sec. 33-18-29w4.
 North of sec. 35-18-29w4.
 East of sec. 36-19-29w4.
 Roads in District 211, tp. 20-29w4.
 On sec. 22-20-29w4.
 Near Sheep creek bridge, tp. 20-1w5.
 Roads in District 275, tp. 20-1w5.
 Between secs. 20/21-19-2w5.
 Roads in District 282, tp. 21-3w5.
 Approaches to Fish creek bridge, sec. 22-22-3w5.
 Approaches to bridge between secs. 22/23-22-3w5.
 Approaches to Nose creek bridge.
 North Blackfoot trail, east and west of Nose creek.
 West of sec. 16-24-24w4.
 Mission Hill.
 Calgary-Macleod trail between secs. 3/4, 9/10-23-1w5.
 Between secs. 16/17-26-1w5.
 Approaches to Scarlett's bridge, sec. 26-30-1w5.
 Approaches to Crowfoot creek bridge, sec. 29-23-21w5.
 Approaches to ferry on Blackfoot reserve.
 Roads in District 387, tp. 31-2w5.
 Trail to Industrial School.
 Between secs. 21/28-32-3w5.
 Roads in District 219, tp. 24-1w5.
 Between secs. 34/35-26-4w5.
 South Morleyville trail, culvert on sec. 30-24-3; approaches to bridge between
 secs. 23/26-24-4; culvert between secs. 24/25-24-4, all w5.
 Coulee at Butler's, south of sec. 4-25-4w5.
 South of secs. 5, 6-25-4w5.
 Culvert over Big Bend creek sec. 14-24-5w5.
 Between secs. 13/14-27-4w5.
 North of sec. 34-26-5w5.
 Ghost River hill, sec. 13-26-6w5.
 Road to Cochrane bridge over Bow river, north of sec. 35-25-4w5.
 Approaches to Jumping Pond creek bridge, sec. 30-24-4w5.
 Approaches sec. 3-26-4w5.
 Sec. 29-26-4w5.
 Dog Pond trail, sec. 27-26-4w5.
 Approaches to Horse creek bridge, between secs. 8/17-26-4w5.
 Approaches to Beaver Dam creek bridge, sec. 1-28-4w5.
 Coulee bridge approaches, sec. 1-28-4w5.
 Between secs. 10/11-29-4w5.
 Approaches to Cochrane bridge, tp. 26-5w5.
 Approaches to McKay's bridge, sec. 35-26-5w5.
 Grand Valley trail, tp. 26, 27-5w5.
 East from Penhold to Edwell and Pine lake, south of secs. 1, 2-37-27w4.
 From Berrydale school house north.
 East from Bowden, tp. 34-1w5 to Edmonton trail.
 East of Innisfail between secs. 21/28, 27/22-35-27w4.
 West of Innisfail between secs. 8/17, then west, tp. 35-28w4.
 East of Olds, north of sec. 33-32-1w5 then east.
 West of Bowden, tp. 34-2w5.
 North of sec. 34-36-26w4.
 Roads in District 322, tp. 37-27w4.
 Roads in District 396, tp. 36-28w4.
 Culvert on sec. 24-38-28w4.
 Roads in District 12, tp. 32-1w5.
 Roads in District 81, tp. 36-1w5.
 Approaches to bridge over Little Red Deer, tp. 34-2w5.
 Between secs. 12/13, 11/14-34-2w5.
 Roads in District 381, tp. 37-2w5.

Between secs. 5/6-43-25w4.
 North of secs. 33-39-24w4.
 Between secs. 35/36-40-27w4.
 Between secs. 33/34, south 5 miles, tp. 42-22w4.
 Gull Lake road.
 Ponoka to Pigeon lake, tp. 43-26w4.
 Blackfalds and Buffalo Lake trail.
 Red Deer to Burnt lake and Medicine river.
 Red Deer east between tps. 37/38-27w4.
 Between tps. 39/40-24w4.
 Between secs. 20/29-40-23w4.
 Roads in District 259, tp. 40-26w4.
 South of sec. 4, 5-41-26w4.
 West of sec. 18-41-26w4.
 Between secs. 15/16-39-28w4.
 Roads in tp. 39-1w5.
 Roads in District 225, tp. 40-27w4.
 Roads in District 472, tp. 40-1w5.
 Hill south of sec. 30-46-22w4.
 Bittern Lake hill north of sec. 22-46-22w4.
 North of secs. 7, 8, 9, 10-46-24w4.
 Tp. 45-23/24w4.
 Blind line west of Leduc, tp. 49-25/36w4.
 Culverts in District 434, tp. 47-24w4.
 West of Rosenroll village, tp. 44-31/32w4.
 Sec. 26-46-23w4.
 Between secs. 5/6-44-22w4.
 On sec. 13-46-24w4.
 Between secs. 1/2-46-24w4.
 Approaches to bridge between secs. 16/17-50-24w4.
 Approaches to bridge between secs. 9/10-50-24w4.
 Approaches to bridge between secs. 9/16-50-24w4.
 Approaches to bridge between secs. 11/12-50-24w4.
 Approaches to bridge between secs. 12/13-50-24w4.
 Approaches to bridge between secs. 30/31-49-25w5.
 North of secs. 32, 33-48-26w4.
 Between secs. 22/27, 23/26, 24/25-53-23w4.
 Between secs. 4/5-51-24w4.
 Between secs. 4/5-53-23w4.
 Culverts in District 39, tp. 53-23w4.
 Between secs. 21/28-52-23w4.
 North of sec. 35-51-15w4.
 Between secs. 2/3-52-15w4.
 Culverts in District 2, tp. 53-22w4.
 On sec. 1-52-24w4.
 Base line secs. 1 to 4-53-23w4.
 Between secs. 7/18, 8/17, 9/16, 10/15-53-22w4.
 From sec. 4, east 6 miles, between tps. 52/53-23w4.
 North of sec. 31-51-24w4.
 Rabbit Hill road between secs. 34/35, 26/27, 22/23, 15/16-51-25w4.
 Between secs. 28/29-53-22w4.
 Culverts in District 47 tp. 52-24w4.
 Approaches to bridge between secs. 34/35-51-15w4.
 Between secs. 21/22, 10/11-52-17w4.
 Between secs. 17/18, 19/20, 20/29-52-18w4.
 Strathcona to Ellerslie, tp. 51-24w4.
 Hay lake trail on sec. 21-52-24w4.
 Culverts in District 40, tp. 55-19w4.
 Between secs. 15/16-56-19w4.
 Culverts in District 43, tp. 56-19w4.
 On sec. 30-54-21w4.
 Between secs. 7/18-55-19w4.
 Fort Saskatchewan to Victoria, between tps. 55/56-20w4.
 Fort Saskatchewan to Agricola, tp. 54-24w4.
 Culverts in District 53, tp. 56-20w4.
 Approaches to Beaver creek bridge between secs. 5/6-56-19w4.
 Roads in District 42, tp. 55-24w4.
 Roads in District 30, tp. 54-24w4.
 Road to Athabasca Landing between secs. 35/36, north 5 miles, tp. 53-24w4.
 Fourteenth base line between secs. 31/32, north 1 mile, tp. 52-25w4.
 Roads in District 222, tp. 55-22w4.

Edmonton to Fort Saskatchewan in Districts 68 and 23.
 Between secs. 13/14-53-26w4.
 Edmonton to St. Albert between tps. 53/54-25w4.
 Culverts in District 68, tp. 53-24w4.
 Culverts in District 23, tp. 54-23w4.
 Roads in District 31, tp. 54-22w4.
 Approaches to bridge on sec. 14-56-23w4.
 Roads in District 28, tp. 52-26w4.
 Between secs. 33/34-55-24w4.
 Roads in District 69, tp. 56-24w4.
 Trail from Morinville to St. Albert.
 East of secs. 12, 13-57-26w4.

DRAINAGE.

Staff. Drainage Engineer.

Owing to the number of applications received during the past few years for the construction of ditches and drains in the improvement of roads, and incidentally lands adjacent thereto, it was thought advisable to have a drainage ordinance passed under the provisions of which lands benefited by the construction of drainage works could be assessed their fair proportion of the cost of construction. Such an ordinance was introduced and passed at the first session of the Assembly last year, and although some of the main features of the bill as passed differ materially from those contained in the drainage acts of the provinces of Ontario and Manitoba it is considered that the ordinance will meet the requirements of the Territories in the construction of both Government and private drainage works, without the long, tedious legal procedure conspicuous in the Ontario law, and permits of the assessment of roads when benefited, a feature which does not exist in the Manitoba law. For the information of those into whose hands copies of this report may come, and who have not obtained copies of The Drainage Ordinance, it has been thought advisable to embody the ordinance in the report as follows:

ORDINANCES OF 1903.

CHAPTER 6.

An Ordinance respecting Drainage.

[Assented to June 19, 1903.]

The Lieutenant Governor by and with the advice and consent of the Legislative Assembly of the Territories enacts as follows:

SHORT TITLE.

1. This Ordinance may be cited as "*The Drainage Ordinance.*"

INTERPRETATION.

2. In this Ordinance, unless the context otherwise requires—
 1. The expression "department" means the Department of Public Works for the Territories.

2. The expression "commissioner" means the Commissioner of Public Works for the Territories.

3. The expression "engineer" means any engineer or land surveyor employed from time to time to perform any of the duties necessary for the carrying out of the provisions of this Ordinance.

4. The expression "road" means and includes any public trail, road or highway including any road allowance laid out under the provisions of *The Dominion Lands Act*.

5. The expression "report" includes all maps, plans and estimates of cost of any work undertaken under this Ordinance.

6. The expression "owner" includes any person who by any right, title or estate whatsoever is or is entitled to land and the executor or administrator of an owner, the guardian of an infant owner, any person entitled to sell or convey the land, an agent of an owner under a general power of attorney or under a power of attorney empowering him to deal with the land and as regards roads, the Commissioner of Public Works.

7. The expression "judge" means a judge of the Supreme Court of the Territories usually exercising jurisdiction in the district in which any ditch or any proposed ditch is or will be situate.

8. The expression "clerk" or "clerk of the court" or "Clerk of the Supreme Court" means any clerk or deputy clerk of the Supreme Court of the Territories in whose district any ditch or proposed ditch under this Ordinance is or will be situate.

9. The expression "ditch" or "drain" means and includes a drain open or covered wholly or in part and whether in the channel of a natural stream, creek or watercourse or not, and also the work and material necessary for bridges, culvert catchbasins and guards in connection therewith.

10. The expression "government ditch" means any ditch constructed by the commissioner whether any portion or all of the expense of the construction and maintenance thereof is borne by the Territories or not.

CONSTRUCTION OF GOVERNMENT DITCHES.

3. Whenever the commissioner deems it may be of public benefit to construct any ditch for the purpose of improving any road in the Territories he may have an examination and survey made of the said tract with the view of determining the feasibility and cost of the construction of such ditch.

4. The engineer employed to make the examination shall, as soon as possible, submit a report to the commissioner on the proposed ditch; which report shall include an assessment showing the proportion of the cost of the proposed undertaking payable by every road and parcel of land to be benefited and shall be filed in the department.

5. The assessment shall be based upon the benefit to be derived from the ditch and the benefit to any parcel of land shall be determined by its increased value for the purpose for which it is or may be used and the benefit to any road by the cost either of making such road as

efficient for a highway as it will be made by the construction of the proposed ditch or of providing some alternative road and making it as efficient for a highway as the benefited road will be made by the construction of the proposed ditch.

6. In the event of the commissioner determining after the receipt of the said report that the proposed ditch shall be constructed, such construction may be proceeded with forthwith; and the commissioner shall cause a notice to be inserted in two consecutive weekly issues in a newspaper, published or circulating in the vicinity of such proposed ditch, of the determination to proceed with the construction thereof, and of the place or places where a copy of the engineer's report may be inspected, one of which shall be at some convenient place in the vicinity of such proposed ditch.

7. At any time within twenty days after the publication of the notice provided for in the next preceding section, any person affected by the assessment made by the engineer's report may file with the clerk of the court a notice of appeal from such assessment or any portion thereof, which notice shall specify the ground of appeal and shall be in duplicate.

(2). The notice of appeal shall contain the post office address of the appellant and of the person whose assessment is appealed against, if any, and shall be accompanied by the sum of ten dollars, the disposition of which shall be determined by the judge after hearing the appeal.

(3) One duplicate of each notice of appeal shall be forwarded by the clerk to the commissioner at Regina by registered mail as soon as the time for filing notices of appeal has expired.

8. The clerk shall thereupon submit the notices of appeal to the judge who shall fix a time and place for hearing the appeals of which notice has been given as prescribed by the next preceding section.

9. At least ten days' notice of the time and place so fixed shall be given by the clerk to the commissioner and to the applicant and to the person against whose assessment the appeal is made, if any, by registered letter.

10. At the time and place so fixed the judge shall proceed to enquire into the sufficiency of the said appeals and for such purpose shall be a court of record and shall have all the powers vested in a court of record in civil cases.

11. The judge may adjourn the said inquiry from time to time and from place to place as he shall think fit.

12. As soon as may be after the hearing of the evidence adduced the judge shall render his decision and shall confirm or alter the assessment in accordance therewith.

13. The costs of any appeals shall be paid and apportioned between the parties in such manner as the judge may think fit and in the event of the \$10 deposited by any party ordered to pay costs not proving

sufficient to pay the costs he is ordered to pay the deficiency shall be paid by the commissioner and shall be added to and form part of the amount of the assessment against the party ordered to pay such costs.

14. The costs allowable under the next preceding section shall be witness fees and expenses, and clerk's fees and expenses and no other which fees and expenses shall be the same as those allowable for similar services under the rules of the Supreme Court.

15. The commissioner may make such arrangements as he may think fit for the construction of any government ditch either by contract or by day labour and for the payment therefor; and for the purpose of such construction and all examinations and other works preliminary or subsequent thereto may by himself, his engineers, agents and servants together with teams, tools, machinery and appliances enter upon any and all lands in whomsoever they are vested.

16. Every person who interrupts, hinders or molests any person while engaged under authority of the commissioner in making any examination for or in constructing, maintaining or repairing any government ditch or the works connected therewith shall be guilty of an offence and upon summary conviction thereof liable to a penalty not exceeding \$50 and costs or to imprisonment for a period not exceeding thirty days or to both.

17. Every ditch or drain constructed under the provisions of this Ordinance shall be continued to an outlet of sufficient size and capacity to carry off the water delivered from such ditch or drain in addition to the water flowing in such outlet during any period of the year; and if necessary such outlet shall be enlarged as part of the construction of such ditch or drain to make it of sufficient size to carry the additional water delivered from such ditch or drain.

18. As soon as conveniently may be after the completion of the construction of any government ditch the commissioner shall ascertain the total cost thereof which shall include the cost of purchasing or expropriating the right of way for the ditch through lands which receive no benefit therefrom but not through lands which are benefited thereby, and shall apportion such cost amongst the lands and roads benefited in the proportions fixed by the assessment mentioned in section 4 hereof as finally confirmed.

19. The commissioner shall thereupon give notice by registered letter to the owner of any parcel of land against which any portion of such cost of construction is apportioned whose address is known of the amount of such cost apportioned against such land and any costs which such owner may be liable to pay under the provisions of section 13 hereof shall be added thereto and shall be deemed to be a part of the sum apportioned against such land.

20. All sums apportioned against any lands under the preceding sections shall be a special lien against such lands in favour of His Majesty having priority over any claim, lien, privilege or incumbrance thereon except taxes.

(2) In the event of any portion of the costs being apportioned against any parcel of land which has not been granted by the Crown the amount of such portion of costs shall become a lien as in this section provided immediately upon the grant of such lands from the Crown.

RECOVERY OF AMOUNT OF ASSESSMENTS.

21. Any sum apportioned against any parcel of land shall be a debt due to His Majesty and may be recovered by suit against the owner of such parcel of land in the name of the attorney general and in any such suit a certificate purporting to be signed by the commissioner shall be *prima facie* evidence of the debt.

22. Any sum apportioned against any parcel of land shall be payable to the commissioner in ten equal annual instalments on the first day of December in each year together with interest at five per cent. per annum on the unpaid amount payable on the same date such interest to be computed from the first day of December of the year in which the ditch is completed on which day the first of the said ten annual instalments shall be paid.

23. Any person liable to pay any sum as in the next preceding section provided may commute the unpaid instalments by a cash payment of the total amount of such instalments or with the consent of the commissioner may pay the same in a less number of annual instalments than as provided in the said section.

MAINTENANCE AND REPAIRS.

24. The commissioner shall make provision for all work necessary for the maintenance of and repairs to any government ditch and the cost thereof shall be apportioned in the same manner as the costs of the construction of such ditch and shall be due and payable on the first day of December of the year in which the work is done.

25. In case the owner of any parcel of land neglects to pay any sum for which he is liable for one month after such sum becomes due the commissioner may cause the same to be levied with costs by distress of the goods and chattels of or in the possession of such owner or of any goods and chattels found on the said parcel of land in the possession of any occupant thereof.

26. In the event of any sum payable by the owner of any parcel of land remaining unpaid for two years, the commissioner may cause notice to be sent by registered letter to all persons shown by the records of the proper Lands Titles Office to have any interest in the said parcel of land to the address shown by such records, if any, that after the expiration of three months from the mailing of such notice application will be made to a judge of the Supreme Court for an order vesting the title of the said parcel of land in His Majesty.

(2) At any time after the expiration of the said three months if the sum or sums due have not in the meantime been paid the attorney general may apply to the judge on not less than ten days' notice to the

parties and in the manner mentioned in the next preceding subsection for a vesting order and the judge may thereupon direct that the said parcel of land be absolutely vested in His Majesty freed from all liens, mortgages and incumbrances of whatsoever kind.

(3) Upon any application under the next preceding subsection any certificate purporting to be signed by the commissioner shall be *prima facie* evidence of the facts stated therein.

(4) In the event of the sum or sums due being paid before the judge has made the vesting order as provided in subsection (2) hereof the said owner shall pay to the commissioner such costs as the judge may direct and such costs shall be deemed to be a part of the sum last due and may be recovered in any manner provided for recovering any other sum payable by such owner.

REMOVAL OF OBSTRUCTIONS.

27. When any government ditch, heretofore or hereafter constructed, becomes obstructed by dams, bridges, fences, washouts and other obstructions caused by the owner or the person in possession of the lands where such obstruction occurs so that the free flow of water is impeded thereby, the person or persons owning or occupying such land shall, upon reasonable notice in writing given by the commissioner, remove such obstructions in any manner caused as aforesaid, and if not so removed within the time specified in the notice the commissioner shall forthwith cause the same to be removed.

28. If the cost of removing such obstruction is not paid by such owner or occupant to the commissioner forthwith the same may be recovered by suit in the name of the Attorney General against such occupant or owner or may be recovered in any manner provided by this Ordinance for the recovery of any other sum payable to the commissioner.

CONSTRUCTION OF PRIVATE DITCH.

29. Any municipality, local improvement district or village or any owner who desires to construct a ditch or drain shall, if such ditch or drain affects other lands than lands owned by such municipality, local improvement district, village or owner, employ an engineer to make necessary surveys and prepare the plans, estimates of cost and other information required with such ditch or drain. 1901, c. 4, ss. 38, 40.

30. Upon completion of the survey of any ditch or drain an application shall be forwarded to the commissioner in form prescribed by the commissioner for authority to construct such ditch or drain; with a plan prepared by the engineer showing the location of the proposed ditch, the names of the owners of lands crossed by such ditch and the outlet for the ditch together with any further information necessary to a clear understanding of the location and character of the proposed undertaking; and such plan shall be accompanied by a detailed report by the engineer regarding the manner in which lands crossed by the ditch will be affected thereby, the probable cost of completing the construction of the ditch and any further information required by the commissioner. 1901, c. 4, s. 42.

31. The application, plan, report and estimates required by the next preceding section shall be filed in the department and if approved by the commissioner a permit shall be issued to the applicant authorising him to proceed with the construction of the proposed ditch or drain and granting a definite period for the completion of such construction. 1901, c. 4, s. 43.

32. The holder of a permit for the construction of a ditch or drain may proceed with such construction across any lands in whomsoever vested doing no unnecessary damage thereto or thereon but shall first pay for the right of way required for such ditch or drain. 1901, c. 4, s. 44.

33. If the holder of such permit is unable to agree with the owner of any land crossed by such ditch or drain as to the compensation to be paid for the right of way required therefor they shall proceed to arbitrate the question of such compensation under the provisions of *The Arbitration Ordinance*. 1901, c. 4, s. 45.

34. This Ordinance shall apply to government ditches the examination for which has been made but the construction of which has not been completed prior to the passing of this Ordinance.

REPEAL.

35. Sections 31 to 46 both inclusive of *The Public Works Ordinance* being chapter 4 of the Ordinances of 1901 are hereby repealed.

To carry out the provisions of the foregoing ordinance a drainage engineer was appointed and the first work undertaken was an examination of the large marsh lying to the north-east of the Soo line between Yellowgrass and Weyburn, by which it is estimated that about 11,000 acres of land will be reclaimed and rendered fit for cultivation, and approximately 20 miles of road allowances will be drained so that they can be improved for road purposes, giving access to stations on the Soo line from the north-east. After the field work at this point was completed an examination was made of MacFarlane (Red Deer) creek in the Prince Albert district with the object of ascertaining what could be done towards its improvement as a drainage channel and in the reclamation of low lying lands along its course. With the examination not being completed at the end of the year it will not be advisable to say anything further on the proposed work.

Owing to the number of applications for drainage works Mr. T. H. Wiggins, Assistant Chief Surveyor, who has had a very broad experience in matters of this kind, was sent to Lacombe to make a further examination into the proposed drainage works to the east and north of that town. His report shows that a large area of land will be benefited and that roads in the vicinity will be greatly improved and in addition the right of way of the C. & E. Railway will receive some benefit.

In addition to the above mentioned a number of smaller drainage works have been examined and reported on by the district surveyors and engineers throughout the country.

The steam ditching machine known as steam ditcher No. 1 belonging to the department, which was operated east of Fort Saskatchewan in 1902, continued working at this point during last year and completed what is known as Government drain No. 2, and much benefit has accrued to roads and lands in the vicinity of the drain. This machine was moved late in the year to Strathcona to be operated this coming season on the proposed drain south of Strathcona towards Ellerslie. No. 2 machine made good progress during the period it was operated on what is known as the Favel's lake drainage scheme north of Edmonton and should complete this work next season. On account of the number of applications received for drainage works in the year 1902 the department ordered in the autumn of that year three additional ditching machines of the same type and capacity (one-half yard dipper) as the two already referred to. They were purchased from Messrs. Beatty & Sons, Welland, Ont. One of these machines was located a few miles to the north of Lacombe and is ready for operation in the coming spring as soon as the frost is out of the ground, and will be employed in the enlargement of a branch of Wolf creek and the construction of a ditch leading thereto southerly to a point about due east of Lacombe. The fourth machine was put together at a point on Long creek near McTaggart's siding on the Soo line and began operations in the month of September, a little more than half a mile of ditch being completed by the end of the season. This work is for the drainage of a large area of land lying to the north-east of the Soo line and draining to Long creek and, as already stated, about 11,000 acres of land will be reclaimed and approximately 20 miles of road allowances will be drained so that they can be improved for public travel. The fifth machine was sent to Prince Albert, being originally intended to put it at work on the enlargement and improvement of MacFarlane (Red Deer) creek, but as the examination and surveys were not completed in time to do any work before the end of the year the machine was rented to the Canadian Pacific Railway Company. There is no question but these machines are the right type to handle certain classes of work where teams and manual labour cannot be employed, on account of the wet nature of the ground and where a channel to be constructed is of large area in cross section to permit of the economical handling of the excavated material. They can also be used to advantage in the enlargement and straightening of existing drainage channels.

A large number of applications were received during the year for the construction of drainage works many of which will doubtless be undertaken by the new local improvement districts as purely local undertakings and as a part of their work in the general improvement of the country.

FERRIES.

The following ferries were operated and installed during the year:

Bow river at Blackfoot reserve.	
Oldman river at Macleod.	
Red Deer river at Steerford.	
Saskatchewan river (north) at Battleford (steam ferry).	
"	at Carlton.
"	at Clover Bar.
"	at Elbow near Henrietta.
"	at Fort Pitt.
"	at Fort Saskatchewan.

Saskatchewan river (north)	at west of Rosthern.
"	at Wingard.
"	at Victoria.
South Saskatchewan river	at Adams'.
"	at Batoche.
"	at Fish creek.
"	at Hague.
"	at Isbister's (Markley's).
"	at north of Maple Creek.
"	at Medicine Hat.
"	at Saskatoon.
"	at St. Laurent.
"	at St. Louis.
"	at Saskatchewan Landing.

It will be noted from the above schedule that 23 ferries were operated under instructions from the department, being an increase of one over the preceding year, the ferry north of Maple Creek having been installed early in the season and put in operation. Some trouble and inconvenience was occasioned by the scow of the ferry over the Bow river at the Blackfoot reserve breaking away and being carried down stream. This ferry was established at a point known as Eagle Ribs, about seven or eight miles above the location of the old ferry, this point being selected at the request of the settlers. The Fort Saskatchewan ferry was turned over to the village early in the season on the understanding that it should hereafter be maintained and operated at the expense of the local authorities, which arrangement has been perfectly satisfactory to all parties concerned, and the department is informed that the ferry more than pays for its operation. From the amount of travel served by the ferries at almost every point there would seem to be little reason why these conveniences for the use of the public should not be self sustaining instead of a heavy bill of expense to the department as at present. This applies especially to the Battleford steam ferry, the Saskatoon ferry and a number of other cable ferries on the south branch and the ferry at Medicine Hat as well. As the new steel bridge over the Old Man river at Macleod will be open for traffic at an early date the ferry at this point will be dispensed with.

FIREGUARDS.

Under the existing contracts and agreements made with The Canadian Pacific Railway Company, Calgary and Edmonton Railway Company, Regina Long Lake & Saskatchewan Railway Company, Alberta Railway and Coal Company, and the St. Mary's River Railway Company 942.27 track miles or 1,884.54 miles of fireguard were ploughed and reconstructed as compared with 1,751 miles of this class of fireguard completed in 1902; and in addition 1,119 miles of other fireguards were completed in Southern Alberta, Assiniboia and Saskatchewan as against 898 miles completed in 1902. Generally speaking these fireguards all consist of 16 furrows ploughed to a depth of four inches, the railway guards being 300 feet from the track line. Notwithstanding the efforts made in the prevention of prairie fires by this means one or two disastrous fires occurred, the worst one starting between Gull Lake station and Swift Current owing to their being no guard constructed, the contractor for the work having found it too difficult to plough.

As the prices for all classes of labour in the Territories have advanced since the agreements with the railway companies were entered into by which the Government was to construct the railway fireguards the companies paying practically a fixed charge for original ploughing and reploughing, it was thought advisable to cancel all the existing contracts to take effect on the 31st December, 1903, in accordance with a provision in the contracts by which either party thereto could cancel the contract by giving three months' notice before the end of any calendar year. The following schedule will show the location and mileage of the guards completed :

FIREGUARD Contracts—1903.

<i>Canadian Pacific Railway, Main Line.</i>		Track miles.	Total.
Calgary to Gleichen.....		52.10	
Gleichen to Cluny.....		9	
Cluny to Crowfoot.....		10	
Crowfoot to Lathom tank.....		19	
Langevin to Bowell.....		20	
Bowell to Medicine Hat.....		15	
Dunmore to Irvine.....		15	
Maple Creek to Colley.....		10.50	
Colley to Gull Lake.....		41.50	
Swift Current to Pasqua.....		118.40	
Pasqua to boundary of municipality of Qu'Appelle.....		50.25	
		—	360.75
<i>Calgary & Edmonton Railway.</i>			
West Macleod to High River.....		59.625	
High River to Okotoks.....		7.625	
Calgary to Crossfield.....		25.37	
Crossfield to Didsbury.....		18.25	
Didsbury north.....		4.75	
		—	115.62
<i>Crow's Nest Railway Line.</i>			
Dunmore Junction to Pincher Station.....		163.5	
Pincher Station to Cowley.....		3.12	
Cowley to Burmis.....		8.93	
		—	175.55
<i>Soo Line.</i>			
Pasqua to Roche Percee.....		147	
Roche Percee to North Portal.....		13	
		—	160
<i>Prince Albert Branch.</i>			
Mileboard 34 to M. B. 44.....		10	
Mileboard 66 to M. B. 94.....		28	
Mileboard 128 to M. B. 145.....		12.25	
		—	50.25
<i>Alberta Railway & Coal Company's Line.</i>			
Lethbridge to Coutts.....		61.60	
		—	61.60
<i>St. Marys River Railway Line.</i>			
Stirling to Spring Coulee.....		18.50	
		—	18.50
FIREGUARDS, 1903.			
<i>Other than along Railways.</i>			Miles.
On north boundary of tp. 24, from C. & E. Railway to re. 20w4.....			62
On north boundary of tp. 26, from re. 25 to re. 28w4.....			26
On west boundary of re. 28w4, from tp. 26 to tp. 30.....			20
On west boundary of re. 28w4, from tp. 23 to tp. 26.....			27
On north boundary of tp. 22, across res. 26, 27, 28w4.....			20

	Miles.
On west boundary of re. 27w4, from C.P.R. to north boundary of tp. 24...	9
On west boundary of re. 2w5, from Sheep creek to High River	14.50
On west boundary of re. 24w4, from Bow river to Little Bow	42
On west boundary of re. 22w4, from Gleichen to north boundary of tp. 24.	17
On north, east and south sides of tp. 20-27w4	18
On north boundary of tp. 18, from re. 24 to re. 27w4	18
On south boundary of tp. 20, across res. 25, 26w4	12
On north boundary of tp. 16, across res. 25, 26, 27, 28w4.....	23
In tp. 28-18w4, from sec. 35 to Little Bow	5.50
On west boundary of re. 26w4, from Crow's Nest Railway to Belly river ..	23
On north boundary of tp. 12 across res. 25, 26, 27w4.....	13.50
On west boundary of re. 24w4 from Old Man river to Little Bow.....	22
On north boundary of tp. 14 from C. & E. Railway to Little Bow river....	30.30
On west boundary of re. 14w4 from north of tp. 5 to Milk river.....	23
On north boundary of tp. 14 from Bow river to Little bow.....	37
On west boundary of re. 20w4 from Crow's Nest Railway to Belly river ..	8
On west boundary of re. 18w4 from Crow's Nest Railway to Belly river. .	7.50
On north boundary of tp. 9 from Old Man river to Belly river.....	6.25
On west boundary of re. 19w4 from Crow's Nest Railway to Belly river....	8.50
On west boundry of re. 18w4 from Crow's Nest Ry. to A. R.&C. Co.'s line.	22
On line one mile west of the east boundary of re. 16w4 from Belly river to Bow river	17
On west boundary of re. 14 from Crow's Nest Railway to north boundary of tp. 5.....	26
On west boundary of re. 14w4 from C. N. P. Railway to Belly river	7
On west boundary of re. 16w4 from C. N. P. Railway to Belly river.....	2.75
On west boundary of re. 12w4 from C. P. Railway to Bow river.....	24
On west boundary of re. 3w4 from C.P. Railway to north boundary of tp. 13	12
On north boundary of tp. 13 from Saskatchewan river to Many Island lake	22
From Saskatchewan river tp. 14-5w4 to C. P. Railway in tp. 14-7w4.....	18
From Saskatchewan river tp. 12-8w4 to coulee in tp. 9-8w4.....	24
From Saskatchewan river to C. P. Railway on line between res. 7/8w4....	11
Stair fireguard.....	11
From sec. 6-12-22w3 to sec. 30-10-20w3.....	18
From C. P. Railway tp. 12-28w3 to Bittern lake tp. 13-28w3.....	7.50
On north boundary of tp. 9 from re. 28w3 to re. 6w4.....	52
Crane lake fireguard.....	23
From sec. 1-13-19w3 to sec. 4-12-18w3.....	8
Gull lake fireguard.....	15
From C. P. Railway to Saskatchewan river on line between res. 15/16w3..	35
From C. P. R. to Swift Current creek on line between res. 15/16w3.....	12
From Swift Current creek to Peltier's lake	41
From Frenchman creek in re. 10, near international boundary to Stonepile, re. 17w3	75
Rush Lake fireguard from tp. 18-10w3 to tp. 19-12w3.....	18
From Swift Current creek, tp. 18-12w3, to Rush Lake guard, tp. 18-11w3..	9
On west boundary of re. 11w3 from C. P. Railway, tp. 16, to north boundary of tp. 13, thence west to re. 14w3.....	26
From sec. 21-19-13w3 to west boundary of tp. 19-15w3.....	15
From river, tp. 20-26w2, to river in tp. 21-27w2	8.25
On south and west sides of tp. 42-17w3.....	12
On north, east, south and west sides of tp. 29-15w2.....	24
On south boundary tp. 15, across res. 6, 7, 8w2	18
On west and south sides of tp. 13-4w2.....	12.75

WATER SUPPLY.

In assisting settlers in the work of obtaining a water supply in those portions of the Territories where difficulties have been met with in boring for water the system adopted in former years was in a measure departed from. In the early days the policy of the Government seems to have been to determine at what depth water could be found by well boring in any particular locality, and what difficulties might be met with so that incoming settlers would be able to form an estimate of the probable cost of obtaining a water supply. The original intention seems to have been modified to some extent owing to the fact that in quite a number of instances the department went to the expense of putting in pumps and

other appliances in wells where water had been obtained. Many of these appliances are now more or less effectual, and in some cases valueless, on account of the very people who received the direct benefit from the well not making any attempt towards keeping the pump in repair. To provide wells for every person who is in need of a water supply, together with the necessary appliances for raising the water, and keep them in in repair would be Herculean task and is totally impracticable. In consequence of this growing state of affairs it was thought advisable to modify the policy in connection with well boring in this way, and the department have during the past season furnished well boring machines free of cost to applicants in their order and paid the wages of the foreman in charge of the machine. All other charges in connection therewith, together with the well casing, have been paid by the applicant. This method seemed to work out very satisfactorily during the past year, but it need not be pointed out that the resources at the disposal of the Government can only meet the necessities of a very limited number of the older settled districts to say nothing of those in the new settlements being constantly located. An effort was also made by the department to assist by way of bonus the introduction of well boring apparatus by practical men who could put down wells for the settlers many of whom are able and willing to pay for the same, and it is hoped that efforts in this direction will be successful, as it seems to be the most practical way of meeting the difficulties of this most serious question. An arrangement of this kind was made with Mr. David Hark, of Rouleau, but the machine arrived too late last fall to have much work done. In very many districts where it has been supposed that it was almost impossible to get water it has been struck in wells from 25 to 50 feet and it would appear that the test augurs, one of which is in practically every territorial constituency, might be used to a greater extent than they have for the last few years. With these two men can easily run down a three inch bit to 50 or 60 feet and as water runs apparently in narrow veins above the blue clay many settlers have been successful in finding water often near dry holes dug to a much greater depth simply because a dug well was just outside the line of the water vein. A considerable number of these tests were made last season, more than half of which were successful.

LOCAL IMPROVEMENT BRANCH.

Staff.....	Clerk in charge. 1 cashier. 1 accountant. 9 clerks. 2 stenographers and typewriters.
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The work of the Local Improvement Branch during the year 1903 increased considerably more than in the previous year; so much so that even with the increased staff the energies of all have been taxed to the uttermost to prevent the work of the branch from getting in arrears.

SMALL DISTRICTS.

During 1903 there were in operation in the Territories the following number of Small Local Improvement Districts, the dates of organisation being given for the purpose of reference:

Districts organised, voluntary, in 1890.....	1
“ “ in 1893.....	2
“ “ in 1894.....	19
“ “ in 1895.....	20
“ “ in 1896.....	15
“ compulsory, in 1897.....	181
“ “ in 1898.....	178
“ “ in 1899.....	32
“ “ in 1900.....	33
“ “ in 1901.....	12
“ by subdivision in 1902.....	2
	—495
Districts disorganised for various reasons	39
	—
Number of districts now in operation.....	456

The work performed by the 414 of the above districts from which receipts were received is appended in the usual schedule form as being the most convenient for reference.

Amount collected by overseer for taxes for 1901, largely payments by companies and other non-resident land owners..	\$29,416.13
Number of days worked in commutation of taxes.....	62,650
Number of miles of road graded.....	657
“ “ cleared.....	426
“ “ fireguard ploughed.....	547
“ bridges built.....	281
“ “ repaired.....	256
“ culverts built.....	1,713
“ “ repaired.....	803
“ dams built.....	32
“ “ repaired.....	82
“ holes, old wells, sloughs, etc., filled.....	3,224
“ yards corduroy completed.....	46,319
Average amount paid overseer for assessing and overseeing work of the district.....	\$42.69

At the session of the Legislature held in November last The Local Improvement Ordinance of 1901 was repealed and a new Ordinance was passed to take effect on and after January 1st, 1904. Under the provisions of this Ordinance the small districts heretofore existing were done away with and provision was made for the division of the country into districts comprising an area of not less than 108 nor more than 216 square miles. It also provided that all the area which was formerly in small local improvement districts might be established as districts under the new ordinance by Order in Council, and that any area of not more than two townships adjoining these small districts, but which was formerly part of a large district, might be included within the districts so organised. Any area over and above the two townships mentioned can only be established as a district on a petition signed by not less than twenty-five residents of the area proposed to be constituted a district.

In the year 1901 an expression of opinion was obtained from the ratepayers in a large number of the old small districts as to the advisability of abolishing the commutation of taxes by labour. At that time less than one hundred districts were in favour of doing away with commutation. Since 1901, however, the feeling against disorganisation and the inclusion of their areas in large districts. A desire was also expressed in many sections of the country for power to raise a larger revenue for local improvement purposes with control of the funds of the district vested in the ratepayers. This desire was

shown by the large number of districts which took advantage of the provision in the law for doubling the amount of the assessment. It has been impossible to realise satisfactory results in road making by labour performed in commutation of taxes, and this fact was realised by the ratepayers in all the more progressive districts. In order to give effect to the widely expressed desire on this matter commutation of taxes by labour has been abolished, as stated, and provision has been made for an assessment of from one and a quarter to five cents per acre, thus enabling the people to raise sufficient funds in each district for such work as can be completed in the short season during which such work can be carried on.

Provision is made in the new ordinance for the election of not less than three nor more than six councillors for each district. These councillors appoint a secretary-treasurer, decide upon the rate of assessment for the whole district and arrange what work has to be done and how it shall be performed.

The country has already been organised into districts under the new ordinance and councillors have been elected in nearly all districts.

The work of assessing the large local improvement districts was very much heavier than in previous years and, owing to the delay in obtaining complete information from the various sources from which the information is available, the assessment was not completed until late in the year. The sum of \$103,234.65 was, however, collected during the year for taxes in large districts and during the first two months of 1904 previous to the date of this report the sum of \$16,405.00. The number of receipts issued for large districts during 1903 for taxes was 10,422.

The sum of \$10,833.46 was collected for arrears of taxes in small districts and forwarded to overseers.

For school districts, \$8,007.31 arrears of taxes were collected and forwarded to secretary-treasurers.

Payment of arrears of taxes collected for small districts and school districts is made by cheque, and in order to pay to the district the amounts collected during the year 1,288 cheques were issued.

In connection with the correspondence of the branch the amount of work involved may be estimated when it is stated that 24,434 items of mail matter were received and 57,859 items of mail matter were sent out. The latter figures comprise 7,172 letters, 12,219 receipts, 34,547 notices and circulars, and 3,921 cheques.

The assessments of large districts for the years 1899, 1900, 1901, 1902 and 1903 were as follows :

NO.	DISTRICT	1899	1900	1901	1902	1903
		\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
500	Calgary	3,157 75	3,044 50	3,221 58	5,806 19	9,866 65
501	Okotoks	1,026 00	1,053 50	1,053 83		
502	High River	1,791 00	1,774 50	2,016 00	5,648 54	9,044 10
503	Pincher Creek	110 00	149 00	1,353 33		
504	Macleod	923 50	921 00	3,375 10	7,322 67	11,798 53
505	Cardston	777 00	3,210 75	3,189 81	7,672 19	13,743 27
506	Lethbridge	2,534 11	2,499 06	4,514 76	9,031 18	16,693 64
507	Medicine Hat	1,994 60	2,336 00	2,568 29	6,838 77	11,385 19
508	Maple Creek	3,188 00	3,094 96	3,043 11	3,839 56	5,426 17
509	Swift Current	2,091 00	2,109 00	1,945 00	5,631 58	7,212 18
510	Wetaskiwin East			1,700 00	8,407 75	11,826 95
511	Moose Jaw	2,727 50	2,682 50	2,947 64	4,571 54	7,205 45
512	Saskatoon	2,611 00	2,852 50	2,755 04	5,969 15	18,092 45
513	Battleford	717 00	674 50	689 83	4,775 24	4,971 58
514	New Oxley	4,227 29	4,269 50	1,148 12	included in 504	
515	Good Spirit	262 00	220 00	542 00	2,530 00	4,888 69
517	Sheho	596 80	592 50	707 77	3,386 57	4,987 46
518	Weyburn	2,082 00	2,054 00	2,710 20	5,256 28	14,295 99
519	Wetaskiwin West			784 00	2,771 48	5,335 87
520	Rouleau		1,552 00	2,400 80	6,767 94	7,926 82
521	Long Lake		2,115 00	2,326 12	4,244 44	4,577 54
522	Touchwood		5,737 80	4,460 16	8,221 81	9,646 30
523	Innisfail		3,585 00	3,581 89	4,598 84	4,495 04
524	Red Deer		1,996 60	2,103 71	7,810 82	11,050 67
525	Moose Mountain		1,074 00	1,744 76	8,176 56	9,732 70
526	Estevan		2,139 00	2,574 98	8,257 82	12,565 84
527	Antler		1,751 00	1,836 21	5,729 66	6,913 57
528	Prince Albert				13,829 30	7,355 21
529	Fertile Belt				2,763 65	4,730 39
530	Beaver Hills				1,706 71	3,242 40
537	Kinistino				3,324 21	4,683 36
538	Saltcoats				1,118 23	6,264 75
541	Fort Pitt				5,334 57	9,288 35
542	Edmonton				8,949 52	12,617 19
544	Tilley				2,457 52	3,672 86
		31,896 55	53,569 57	61,294 04	182,300 29	275,537 16

STATEMENT showing Taxes assessed, Amount collected and Amount expended in Large Local Improvement Districts in 1903.

No.	District	Amount of assessment		Amount collected		Amount expended	
		\$	c.	\$	c.	\$	c.
500	Calgary	9,866	65	3,862	33	2,537	69
502	High River	9,044	10	7,550	31	3,703	34
504	Macleod	11,798	53	8,479	15	5,093	59
505	Cardston	13,743	27	6,389	24	8,346	30
506	Lethbridge	16,693	64	3,184	00	9,418	80
507	Medicine Hat	11,385	19	5,376	73	7,100	06
508	Maple Creek	5,426	17	3,794	13	4,546	83
509	Swift Current	7,212	18	6,229	99	4,497	71
510	Wetaskiwin East	11,826	95	5,242	86	1,122	70
511	Moose Jaw	7,205	45	3,146	62	10,118	37
512	Saskatoon	18,092	45	3,281	23	5,101	97
513	Battleford	4,971	58	679	62	1,370	21
515	Good Spirit	4,888	69	216	28	709	16
517	Sheho	4,987	46	315	04	327	16
518	Weyburn	14,295	99	2,110	42	7,172	08
519	Wetaskiwin West	5,335	87	1,395	28	670	97
520	Rouleau	7,926	82	4,013	11	5,995	48
521	Long Lake	4,577	54	1,482	11	3,922	04
522	Touchwood	9,646	30	2,463	50	1,602	28
523	Innisfail	4,495	04	3,120	16	1,271	13
524	Red Deer	11,050	67	4,355	71	1,838	67
525	Moose Mountain	9,732	70	1,139	00	1,630	23
526	Estevan	12,565	84	1,279	55	4,910	77
527	Antler	6,913	57	1,568	81	3,348	74
528	Prince Albert	7,355	21	649	16	1,413	16
529	Fertile Belt	4,730	39	1,899	25	485	94
530	Beaver Hills	3,242	40	1,088	26	333	61
537	Kinistino	4,683	36	304	15	1,609	27
538	Saltcoats	6,264	75	425	21	385	11
541	Fort Pitt	9,288	35	1,043	71	1,237	91
542	Edmonton	12,617	19	4,752	32	4,090	37
544	Tilley	3,672	86	2,439	78	759	72
		275,537	16	92,227	02	106,671	77

OVERDUE Taxes collected for Small Districts during 1903 and forwarded to Overseers, \$10,833.46.

DISTRICT	AMOUNT	DISTRICT	AMOUNT	DISTRICT	AMOUNT	DISTRICT	AMOUNT
4	\$130 00	50	\$125 00	78	\$50 77	104	\$51 25
11	258 00	54	17 50	81	26 00	107	50 00
12	34 50	55	27 50	82	30 00	108	42 50
13	12 50	56	2 50	83	42 50	109	17 50
14	33 75	58	2 75	87	2 50	112	67 50
15	98 25	62	2 50	88	10 00	113	57 50
17	26 50	63	32 50	89	10 00	114	38 75
18	5 00	64	22 50	90	102 50	115	117 65
19	15 00	65	7 50	91	28 50	118	7 50
23	15 00	66	71 00	92	12 50	119	22 50
24	21 50	67	20 00	93	32 50	120	2 50
27	34 00	68	10 00	94	22 50	121	74 50
28	2 00	69	10 00	95	2 50	122	47 50
31	5 00	70	111 00	96	2 50	123	55 00
34	40 00	71	7 50	98	55 00	125	57 35
39	1 00	72	15 00	99	97 50	126	40 00
40	10 00	74	15 00	100	27 50	127	5 50
41	5 00	75	1 25	101	5 00	128	16 00
45	47 75	76	2 50	102	65 00	129	44 00
49	117 50	77	2 50	103	85 00	130	115 00

OVERDUE Taxes collected for Small Districts during 1903 and forwarded
to Overseers, \$10,833.46—*Continued.*

DISTRICT	AMOUNT	DISTRICT	AMOUNT	DISTRICT	AMOUNT	DISTRICT	AMOUNT
131	\$12 50	203	\$50 50	303	\$10 00	397	\$27 00
135	25 00	204	12 50	306	65 00	400	5 00
136	711 50	211	15 00	307	55 00	403	5 00
137	65 00	212	6 50	308	10 00	405	2 50
138	5 00	213	17 50	309	255 00	409	7 50
139	25 00	214	15 00	310	7 50	414	2 50
141	67 50	215	5 00	311	15 00	418	192 52
142	5 00	216	41 00	312	18 75	419	79 88
143	11 00	219	30 00	314	45 00	421	66 00
144	50 00	221	101 00	315	233 12	423	10 00
145	46 50	222	3 50	316	27 50	424	3 75
146	12 50	223	7 50	317	2 50	425	2 50
148	14 50	224	85 00	319	2 50	426	15 00
149	73 00	225	7 00	320	72 75	430	2 50
150	12 50	227	35 00	322	5 00	434	10 00
151	10 00	228	2 50	324	20 00	440	42 50
152	37 50	230	2 50	325	17 50	441	36 50
153	92 50	233	24 00	326	10 00	445	24 75
154	62 50	235	31 50	330	12 50	450	2 50
155	5 00	238	42 50	331	58 85	452	120 00
156	10 00	240	15 00	333	27 50	454	10 00
157	22 50	241	1 25	334	27 50	455	41 50
158	10 00	242	30 00	336	5 00	457	7 50
160	20 00	243	58 75	340	40 85	460	17 17
162	85 00	244	2 50	341	3 75	462	7 50
164	27 50	245	17 50	343	46 25	463	77 50
166	2 50	246	41 00	344	10 00	466	45 00
167	81 25	248	5 00	346	22 50	467	20 00
168	27 50	250	5 00	347	12 50	469	1 25
170	35 50	252	30 00	348	12 50	473	6 25
172	140 00	253	2 50	349	3 75	474	52 50
173	107 50	259	2 50	350	37 50	475	7 80
174	10 00	260	2 50	351	67 50	476	19 20
175	5 00	262	15 00	353	55 00	477	12 50
176	90 00	264	31 50	356	2 50	478	150 00
177	22 50	265	16 75	360	23 25	479	12 50
178	27 50	266	25 00	361	100 18	481	2 50
179	5 00	268	55 00	363	50 87	482	15 00
180	6 00	270	12 50	364	37 50	483	140 00
181	140 00	271	20 00	366	2 50	484	110 00
182	121 25	276	10 00	371	2 50	485	10 00
183	2 50	277	7 50	372	10 00	486	12 50
184	52 50	279	2 50	376	3 75	488	82 50
185	2 50	280	2 50	377	5 00	489	2 50
186	62 50	284	45 00	378	82 50	491	25 06
188	12 50	288	25 50	384	134 00	492	7 50
189	63 50	294	19 00	386	49 50	493	1 25
190	5 00	295	37 50	387	128 50	531	30 00
191	12 50	296	37 50	388	34 50	533	10 00
193	15 00	297	2 50	389	5 00	534	52 25
194	36 25	299	44 00	393	17 38	535	27 50
195	5 00	301	7 50	394	187 81	536	5 00
196	37 50	302	52 50	396	26 50	543	2 50
200	7 50						

Forfeiture of Lands.

Owing to two sessions of the Legislature having been held during the year, it was not possible for the Attorney-General's Department to arrange for courts for the confirmation of returns of arrears of taxes. The lands which have been forfeited to date are as follows:

SCHEDULES of Lands Forfeited for Non-payment of Local Improvement Taxes.

LANDS	Date of approval by judge	LANDS	Date of approval by judge
N.W. sec. 21-25-4w2	Nov. 5, 1902	S.W. sec. 26-9-26w4	Oct. 16, 1902
S.W. sec. 17-25-4w2	"	S.E. sec. 26-9-26w4	"
Lot 9, blk. 47, Broadview, tp. 16-5w2	May 30, 1901	S.W. sec. 10-39-26w4	Nov. 18, 1902
N.E. sec. 6-29-7w2	Jan. 28, 1902	Sec. 7-3-27w4	Oct. 16, 1902
S.E. sec. 28-30-9w2	Nov. 5, 1903	E. $\frac{1}{2}$ sec. 1-3-28w4	"
S.E. sec. 30-30-10w2	"	Lot 25, blk. 12, Innisfail, tp. 35-28w4	Nov. 18, 1902
Lot 1, blk. 3, Fort Qu'Appelle	Oct. 27, 1902	S.E. sec. 12-53 28w4	Nov. 12, 1902
Lot 2, blk. 4, Fort Qu'Appelle	"	S.W. sec. 26-24-1w5	Oct. 15, 1902
N.E. sec. 32-20-13w2	"	Lot 14, blk. 3, in S.E. sec. 22-24-1w5	"
S.E. sec. 14-24-13w2	"	Lots 1 & 2, blk. 3, & lots 11 & 12, blk. 4, S.E. sec. 22-24-1w5	"
L.S. sec. 9 of 1-23-13w2	"	Lots 5 & 6, blk. 3, S.E. sec. 22-24-1w5	"
S.E. sec. 10-22-14w2	"	Lots 4 & 5, blk. 4, S.E. sec. 22-24-1w5	"
S.E. sec. 22-29-14w2	"	S.E. sec. 4-22-1w5	"
N.E. sec. 16-21-15w2	"	N.W. sec. 9-7-1w5	"
N.E. sec. 36-22-15w2	"	N.W. sec. 4-7-2w5	Oct. 16, 1902
S. $\frac{1}{2}$ sec. 22-21-15w2	"	N. $\frac{1}{2}$ sec. 32-34-2w5	Nov. 18, 1902
N.E. sec. 4-23-15w2	"	S.W. sec. 12-21-3w5	Oct. 15, 1902
S.E. sec. 28-27-15w2	"	S.E. sec. 24-21-3w5	"
S.W. sec. 28-22-16w2	"	S.W. sec. 36-21-3w5	"
S.E. sec. 36-29-15w2	"	S.W. sec. 24-25-3w5	"
S.E. sec. 6-23-16w2	"	S.W. sec. 26-19-3w5	"
S.W. sec. 6-18-17w2, except C.P.R. way	"	N.W. sec. 26-19-3w5	"
S. $\frac{1}{2}$ of L. S. 12 & portion N. of Qu'Appelle R. of S. W. sec. 18-21-17w2	"	S.E. sec. 10-29-3w5	Nov. 18, 1902
N.E. sec. 4-23-17w2	"	S.W. sec. 10-29-3w5	"
N.E. sec. 36-15-18w2	"	N.W. sec. 16-29-3w5	"
N.E. sec. 12-14-19w2	"	W. $\frac{1}{2}$ of S.E. 16-29-3w5	"
N.E. sec. 36-15-20w2	"	N. $\frac{1}{2}$ 10-29-3w5	"
S.E. sec. 4-22-20w2	"	S.E. sec. 16-29-3w5	"
S.W. sec. 36-21-21w2	"	S.W. sec. 16-29-3w5	"
S.W. sec. 10-22-21w2	"	N.E. sec. 30-24-4w5	Oct. 15, 1902
S.W. sec. 28-19-22w2	Feb. 8, 1901	S.E. sec. 36-26-5w5	"
Fr. N.W. sec. 22-21-22w2	Oct. 27, 1902	N.W. sec. 10-15-30w1	Dec. 13, 1901
N.W. sec. 44-28-25w2	Jan. 7, 1902	S.W. sec. 10-15-30w1	"
N.W. sec. 36-47-25w2	"	S.W. sec. 22-33-31w1	Nov. 5, 1902
S.E. sec. 15-48-25w2	Oct. 21, 1902	Lot 10, blk. D, Carnduff, tp. 2-33w1	Apr. 17, 1901
S.W. 15-48-25w2	"	Lot 10, blk. 10, Churchbr'ge, part sec. 17-22-32w1	Nov. 5, 1902
S.E. sec. 4-19-25w2	Oct. 27, 1902	S.E. sec. 27-23-3w2	Jan. 29, 1902
S. $\frac{1}{2}$ of N.W. sec. 10-45a-27w2	Oct. 21, 1902	N.E. sec. 27-23-3w2	"
N.W. sec. 18-47-27w2	"	N.W. 27-23-3w2	"
Fr. E. $\frac{1}{2}$ sec. 35-38-4w3	"	S.W. 27-23-3w2	Nov. 5, 1902
S.E. sec. 1-37-5w3	"	Lot 13, blk. 4, S.E. sec. 22-24-1w5	Oct. 15, 1902
S.W. sec. 1-37-5w3	"	Lot 14, blk. 4, S.E. sec. 22-24-1w5	"
N.E. sec. 26-36-6w3	"	Lot 3, blk. 5, S.E. sec. 22-24-1w5	"
S.W. sec. 20-46-15w3	"	Lot 6, blk. 2, S.E. sec. 22-24-1w5	"
N.W. sec. 20-46-15w3	"	Lots 7 & 9, blk. 2, S.E. sec. 22-24-1w5	"
S.E. sec. 2-44-16w3	Jan. 11, 1902	Lot 26, blk. 2, S.E. sec. 22-24-1w5	"
N.W. sec. 3-42-17w3	"	Lot 2, blk. 29, Rouleauville, sec. 10-24-1w5	"
S.W. sec. 34-11-22w3	Oct. 17, 1902	Lot 3, blk. 29, Rouleauville	"
N.E. sec. 32-9-27w3	"	Lot 4, blk. 29, Rouleauville	"
S.W. sec. 12-8-29w3	"	Lot 7, blk. 29, Rouleauville	"
N.W. sec. 24-12-5w4	Nov. 7, 1901		
N.E. sec. 18-9-21w4	Oct. 16, 1902		
S.W. sec. 8-55-21w4	Nov. 20, 1902		
S.W. sec. 34-19-22w4	Oct. 15, 1902		
N.W. sec. 26-7-22w2	Oct. 16, 1902		
S.W. sec. 4-47-22w4	Nov. 20, 1902		
N.W. sec. 36-43-23w4	Nov. 18, 1902		
N.W. sec. 28-21-15w4	Oct. 29, 1901		
N.E. sec. 16-9-25w4	Oct. 16, 1902		
W. $\frac{1}{2}$ sec. 14-10-25w4	"		
N.W. sec. 17-2-25w4	"		
S.E. sec. 9-1-25w4	"		

SCHEDULE of Lands Forfeited and Title vested in Crown.

LAND	Date of approval of return	Date of final order of forfeiture
S.W. sec. 20-16-1w2	May 30, 1901	Aug. 12, 1902
S.W. sec. 30-16-1w2	"	"
S.E. sec. 36-12-1w2	Dec. 13, 1901	Jan. 13, 1901
N.W. sec. 34-20-1w2	"	Jan. 13, 1903
N.W. sec. 12-4-2w2	Apl. 17, 1901	Apl. 26, 1902
N.W. sec. 10-15-2w2	May 20, 1901	May 30, 1902
N.W. sec. 14-3-2w2	Dec. 17, 1901	Jan. 13, 1903
N.W. sec. 36-9-2w2	Dec. 18, 1901	"
N.W. sec. 19-8-2w2	"	"
S.W. sec. 2-19a-3w2	May 25, 1901	Oct. 4, 1902
S.E. sec. 4-23-3w2	"	May 30, 1902
S.W. sec. 16-25-4w2	"	"
S.E. sec. 24-16-6w2	"	"
N.W. sec. 6-18-7w2	Dec. 11, 1901	Jan. 13, 1903
S.E. sec. 16-21-8w2	Apl. 23, 1901	"
N.W. sec. 28-19-18w2	Nov. 11, 1901	Dec. 18, 1902
N.E. sec. 10-21-19w2	"	"
N. $\frac{1}{2}$ of S.W. 10-17-20w2	"	"
S.W. sec. 28-18-24w2	"	"
S.W. sec. 28-19-22w2	Feb. 8, 1901	Feb. 19, 1902
N.E. sec. 14-18-25w2	Nov. 1, 1901	Dec. 18, 1902
N.E. sec. 22-47-25w2	Jan. 7, 1902	Jan. 13, 1903
N.W. sec. 22-47-25w2	"	"
S.E. sec. 5-20-26w2	Nov. 1, 1901	Dec. 18, 1902
Lots 10 & 12, blk. C.R. lot 13, Prince Albert settlement survey	Jan. 7, 1902	Jan. 13, 1903
Blks. 33, 48, 50, 64 & 66 riv. lot 76, Prince Albert settlement survey	"	"
Lots 1 to 22 blk. 7, lots 1 to 18 blk. 8, lots 12 to 20 blk. 9, lot 22 blk. 9, lots 1 to 22 blk. 11, lots 1 to 11 blk. 14 in river lot 77, Prince Albert settlement survey	"	"
N.W. sec. 2-43-2w3	"	"
N.E. sec. 34-10-27w3	Nov. 15, 1901	Dec. 18, 1902
E. $\frac{1}{2}$ of S.E. 16-47-23w4	Oct. 24, 1901	Dec. 18, 1903
N.E. sec. 14-45-24w4	"	Dec. 18, 1902
S.E. sec. 36-54-25w4	Jan. 22, 1901	Feb. 6, 1902
S.W. sec. 24-52-25w4	Oct. 22, 1901	Dec. 18, 1902
N.E. sec. 23-21-25w4	Oct. 29, 1901	"
N.E. sec. 28-34-27w4	Oct. 25, 1901	"
N.E. sec. 26-24-28w4	Oct. 28, 1901	"
Lots 67 and 68 Morden Avenue, Pincher Creek, tp. 6-30w4	Nov. 18, 1901	Jan. 13, 1903
S.E. sec. 10-22-1w5 (except C.&E. Ry.)	Oct. 29, 1901	Dec. 18, 1902
N.W. sec. 15-22-1w5	"	"
S.E. sec. 30-22-1w5	"	"
S.E. sec. 32-22-1w5	"	"
N.E. sec. 34-20-2w5	"	"
S.W. sec. 2-22-3w5	Oct. 28, 1901	"
S.E. sec. 2-22-3w5	"	"
N.E. sec. 32-22-3w5	"	"
S.E. sec. 26-19-3w5	Oct. 29, 1901	"
S.W. sec. 26-27-4w5	Oct. 28, 1901	"
W. $\frac{1}{2}$ 34-24-4w5	"	"
N.W. sec. 34-11-30w1	Dec. 18, 1901	Jan. 13, 1902
S.W. sec. 2-11-31w1	"	"
W. $\frac{1}{2}$ 17-14-31w1	"	"
N.W. sec. 2-12-32w1	"	Jan. 13, 1903
S.E. sec. 21-13-32w1	"	"
N.W. sec. 24-19-32w1	"	"

VILLAGES.

A striking evidence of the increase in population and of the desire of the people to help themselves is shown in the number of hamlets erected into villages under the provisions of The Village Ordinance, and also in the number of villages proceeding to the incorporation as towns. During the year 1903, 23 hamlets were established as villages and steps have been taken towards the establishment of six others. The villages incorporated as towns during 1903 were Arcola, Maple Creek, Saskatoon, Raymond, Rosthern, Wapella and Weyburn. The number of villages now established with names of overseers and dates of organisation is given in the schedule hereunder.

NAME OF VILLAGE	NAME OF OVERSEER	DATE OF ESTABLISHMENT
Alameda.....	J. J. Heaslip	December 29, 1898
Balgonie.....	James R. Hagar	April 20, 1903
Blairmore	W. A. Beebe.....	September 3, 1901
Broadview	Richardson Robinson	December 23, 1898
Carievale	M. O. Hedley	March 11, 1903
Carlyle	Ephraim Abercrombie.....	March 13, 1902
Carnduff.....	Nelson Spencer	March 29, 1899
Carstairs.....	William H. Hunter	May 15, 1903
Churchbridge	James Heasman	September 17, 1903
Claresholm	William Moffat	May 30, 1903
Cochrane	A. McEwen	June 11, 1903
Craik	Gustave O. Curtis	October 20, 1903
Didsbury	George B. Sexsmith	September 24, 1901
Duck Lake.....	William Fawcett	December 23, 1898
Esterhazy	George Wrightson	December 3, 1903
Estevan	H. W. Lea	November 2, 1899
Fleming	J. J. Jupp	July 2, 1896
Fort Saskatchewan.....	H. E. Daniel	March 1, 1899
Frank	J. H. Farmer	September 3, 1901
Gainsboro	William D. Keenan	May 23, 1894
Gleichen	V. I. Beaupre.....	January 24, 1899
Grenfell.....	Reginald Gwynne	April 12, 1894
Hague	Klass D. Dyck	August 25, 1903
High River	Percy Taylor	December 5, 1901
Innisfail	August Kremer	December 15, 1899
Irvine	Benjamin Schlipf.....	September 17, 1903
Langenburg	James Nixon	March 27, 1903
Leduc	David Wade.....	December 15, 1899
Lloydminster	R. N. Blackburn.....	November 24, 1903
Lunsden	James Mair	December 23, 1898
Magrath	John Lye Gibb	August 20, 1901
Manor	Philip Cooke	April 15, 1902
Macoun	E. Rollins	October 14, 1903
Melfort	Thomas Clarke	November 4, 1903
Milestone	Joseph Harvey	March 11, 1903
Millett	James Blades	June 11, 1903
Morinville	Philias Gaudette	August 24, 1901
Mountain View	Joseph H. Gold	February 13, 1902
Nanton	John M. Bender	June 22, 1903
North Portal	E. R. MacPhee	November 16, 1903
Nutana	William P. Bate	October 16, 1903
Olds	W. J. Brumpton.....	May 26, 1896
Pincher Creek	A. R. Dempster.....	August 18, 1898
Ponoka	Cook Myers	October 22, 1900
Fort Qu'Appelle	William M. Thomson.....	June 2, 1898
Riverside	J. M. Lowndes	July 6, 1903
Rouleau	A. E. Westbrook	July 22, 1903
Rouleauville	W. R. Winter	November 2, 1899
Saltcoats	A. B. Lauder	April 4, 1894
Stafford	Thomas Foster	May 7, 1901
St. Albert	Michel Peltier	December 7, 1899
Staveley	Sydney Cooper	October 16, 1903
Stirling	William H. Hardy.....	September 3, 1901
Yellowgrass	W. Stephens	July 22, 1903

ARREARS OF SCHOOL TAXES.

Under the provisions of The School Assessment Ordinance secretary-treasurers of school districts have to forward to the commissioner of the department a return of all unpaid taxes to enable the department to deal with school lands on which taxes are in arrear for two years or more in the same manner as lands in similar conditions in local improvement districts are dealt with, in accordance with the forfeiture clauses of the ordinance.

Information is furnished by the local improvement branch in reply to enquiries as to arrears of taxes on lands in school districts. This entails considerable correspondence, and the taxes received by the department in response to information furnished from the returns of arrears have to be entered by the cashier and official receipts forwarded.

As already stated the sum of \$8,007.31 was collected by the local improvement branch during the year 1903 for arrears of taxes due to school districts, and the amounts due to each district were duly forwarded to the secretary-treasurer in every case.

IRRIGATION OFFICE.

Staff	{ 2 assistant engineers. 1 draughtsman. 1 clerk of records and correspondence clerk.
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The work of the Irrigation Office is embodied in the following schedule.

Number of letters received	1,531
Number of letters sent out	1,726
Number of forms and circulars prepared and mailed	2,800
Number of applications for water rights, with necessary memorials, plans and notices, examined and recorded (in duplicate)	57
Number of licences received and recorded (in triplicate)	11
Number of transfers and agreements for use of water received and recorded (in triplicate)	175
Number of licences of occupation for right of way for irrigation works over Crown lands received and recorded	19
Number of returns, etc., received and recorded and placed on file respecting hydrographic records	520

The present standing of irrigation canal and ditch construction in the Territories may be summarised as follows :

Number of canals and ditches constructed	167
Length of constructed canals and ditches	480 miles
Number of acres susceptible of irrigation from canals and ditches	4,125,000
Number of water rights recorded for domestic, power and other purposes	163

including areas of 3,000,000 acres and 500,000 acres to be reclaimed by the irrigation projects of the Canadian Pacific Railway Company and the Canadian North-west Irrigation Company respectively.

In concluding my report it is my desire to once more refer to the many changes which have taken place in the staff of this department since 1902, and to point out that the vacancies had been filled with capable and efficient public servants. Generally speaking the whole staff both on the inside and outside services have shown, during the time I have had in a measure supervision of the department, marked zeal in the prosecution of their several duties and one and all contributed their assistance in carrying on the work of the department which has so many important matters in the opening up of a new country assigned to it.

Your obedient servant,

B. J. SAUNDERS.

INDEX.

	PAGE
Accidents in coal mines	14-17
Accountants' branch, work of	40
Administration and expenditure on public works	8
Anthracite coal district	13
Bridges, construction of	60
" schedule of	61
" special mention of important	65
" steel	64
" Old Man and Belly river	65
Buildings, departmental	59
Boilers, steam	20
" " inspectors of	20
" inspectors reports of	24
Canmore coal district	13-17
Certificates, holders of, as coal mine managers	15
" " " pit boss	15
" " " fire boss	16
" " steam boilers, as first class engineer	27
" " " second class engineer	28
" " " third class engineer	32
Coal Mines Ordinance, administration of	10
" " examination under	14-19
" accidents in	14-17
" improvements in	11
" in operation	10-16
" inspections of	19
" output of	11
" new	16
" report of inspectors of	16
Coal mining prospects	20
Correspondence branch, work of	9
" " staff of	9
Crow's Nest Pass coal district	12
Departmental offices, removal of	59
Dominion Government, reconstruction of bridges belonging to	65
Drainage branch, work of	76
" Ordinance, The	76
" required	7
Edmonton coal district	13
Engineering branch, work of	58
" " staff of	58
Expenditure (comparative) for public works	8
" for public works	8, 40
Examinations under Coal Mines Ordinance	14-19
Ferries	83
Fireguards required	7
" completed	84-86
Geographic Board	58
Irrigation branch, work of	96-97
Inspection of coal mines, report of	16
Inspectors of steam boilers	20
" " reports of	28
Lethbridge coal district	12
Local Improvement Ordinance (new)	8
" " districts, overseers, list of	8
" " taxes collected under Ordinance	40, 41

	PAGE
Local improvement districts, cheques issued in payment of accounts.....	40
“ “ staff	87
“ “ work of.....	88-96
Lands forfeited for non-payment of local improvement taxes.....	93
Maintenance of roads	67
“ buildings	59
“ public works.....	60
Normal school	60
Overseers of local improvement districts, list of, ...	9
Public works, repairs to	60
“ expenditure upon.....	8, 40, 41
“ “ increased, over 1902	41
“ administration.....	8, 41
“ supervision of.....	41
“ superintendence and inspection of.....	58, 65
Reports of inspector coal mines.....	16
“ “ steam boilers.....	28
“ “ district surveyors and engineers.....	43
Roads, construction and maintenance of	67
“ schedule of improvements	67
“ improvements required.....	8
Settlements, requirements of new.....	8
School tax arrearages, collection of	41
Staff, changes in.....	7
“ reorganisation of.....	9
Steam Boilers' Ordinance, amendments to	21
“ “ work in connection with	20
“ form of provisional certificate	22
“ holders of certificates under	27
“ inspectors under Ordinance.....	20
“ inspection of	23, 24, 25, 26
“ schedule showing increased work.	41
Souris coal district	12, 17
Surveys branch, work of	42
Surveyors, reports of	43
Steam ditching machines.....	83
Taxes collected	40
Territorial map.....	58
Vault accommodation	59
Villages.....	95
Warehouse	60
Water supply.....	86

